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中国秋海棠属新植物*

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NEW TAXA OF THE *BEGONIA* L. (BEGONIACEAE) FROM CHINA

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Key words Begoniaceae; *Begonia*

关键词 秋海棠科;秋海棠属

1 黄连山秋海棠 新种 图1

Begonia coptidi-montana C. Y. Wu, sp. nov. (Sect. Alaecida C. B. Clarke)

Species *B. taiwanianae* Hayata arctissime affinis, sed foliis minoribus remote levissimeque denticulatis, capsularum alis variabilibus differt.

Herba perennis. Rhizoma breve, crassum, atro-rubrum. Caulis 0.7—1.2 m altus, robustus, atro-ruber, longitudinaliter angulatus, glaber. Folia alterna vel 2 ad ramum brevem fasciculata, longe petiolata; laminae valde inaequilaterales, ovato-lanceolatae, 5—12 cm longae, 1.8—4 cm latae, apice longe caudato-acuminatae, basi valde obliquae, latere angustiore cuneatae vel subrotundatae, latere latiore rotundato-auriculatae, auriculis usque ad 8—13 mm longis, supra saturate virides, sparsissime hispidae, subtus viridulae, sparse hispidulae, margine irregulariter levissime sinuatae remote denticulatae, denticulis triangularibus apice saepe breviter aristatis; petioli 3—5 cm longi, glabri vel subglabri; stipulae membranaceae, lanceolatae, caducae. Inflorescentia saepe 2-flora; pedunculus 2.5—5 cm longus, subglaber; flores rosei; bracteae membranaceae, oblongae, 3—4 mm longae, circ. 1 mm latae, caducae; pedicelli 8—30 mm longi, subglabri. Flos staminatus: tepala 4, 2 exteriora late ovata, 8 mm longa, circ. 6 mm lata, apice rotundata, 2 interiora oblonga, circ.

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* 以此文纪念已故的俞德浚(T. T. Yü)教授(研究中国秋海棠科的第一位学者)。

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5 mm longa, 3.5—4 mm lata, apice subacute; stamina numerosa, filamentis liberis 1—1.5 mm longis, antheris luteis obovoideis circ. 1 mm longis, connectivis haud productis. Flos pistillatus: tepala 5, inaequalia, late ovata vel oblonga, apice rotunadata vel obtusa; styli 3, liberi: stigmata tumida, tortuosa, recurvata; ovarium 3-loculatum, in quoque loculo placentae segmentis 2 praeditum Capsula circ. 1 cm longa, pendula, inaequaliter 3-alata, ala una maxima falcata 1.3—2 cm longa 1 cm lata conspicue reticulata vel minora obtusa hemisphaerica, alis reliquis duabus minoribus oblique triangularibus 5—7 mm longis; semina numerosa, brunneola, oblonga, 0.5 mm longa, laevia.

Yunnan (云南):Luchun (绿春),Huanglian Mt. (黄连山), Luosha River (落沙河), alt. 2200 m, in bamboo bushes under forests, 1973-10-16, D. D. Tao (陶德定) 862 (holotype, KUN, Iso-A); same locality, alt. 1825 m, among grasses under banana bushes, 1991-08-21, Y. M. Shui (税玉民) B91-595; Luchun (绿春),alt. 1750 m, on slopes, 1991-08-19, Y. M. Shui (税玉民) B91-584.

本种和台湾秋海棠 *B. taiwaniana* Hayata 极相似,但叶片较小,齿疏而极浅;果翅变化很大,从而易于识别。从分布间距看,二者亦非一种。

2 小花秋海棠 新种 图2

Begonia peii C. Y. Wu, sp. nov. (Sect. Alaecida C. B. Clarke)

Species *B. tricuspidatae* C. B. Clarke e Moulmein arcte affinis, sed capsulae alis obtusis haud tricuspidatis valde differt; *B. saxifragifoliae* Craib similis, sed foliis non leviter lobulatis diversa.

Herba perennis, parva, monoecia. Rhizoma tuberiforme, radices numerosas longas edens. Caulis flaccidus, 7—11 cm altus, glaber. Folia alterna, petiolata; laminae late ovatae vel suborbiculares, 1—2.9 cm longae, 0.9—3.2 cm latae, apice rotundatae vel acutae, basi subaequilaterales, cordatae, margine crenatae, supra saturate virides, orbiculari-maculatae, subtus viridulae, foveolato-prominentes, utrinque glabrae et conspicue palmatim 5-nerves; petioli 1—1.8 cm longi, glabri; stipulae caducae. Dichasium terminale, nonnulliflorum; bracteae foliaceae, late ovatae, 6 mm longae et latae, apice obtusae, margine serratae, glabrae; bracteolae membranaceae, caducae, pedicelli 5—10 mm longi, juventute glanduloso-puberulae, deinde subglabrescentes. Flos staminatus: tepala 4, rubra, 2 exteriora suborbicularia, 3.5—4 mm longa et lata, apice obtusa, 2 interiora anguste oblonga, circ. 2.5 mm longa, 1 mm lata, apice obtusa; stamina 7—9, filamentis circ. 1 mm longis parte inferiore connatis superne liberis, antheris obovoideis circ. 0.5—1 mm longis. Flos pistillatus: tepala 4, rubra, 2 exteriora suborbicularia, 3.5—4 mm longa et lata, apice rotundata, 2 interiora anguste oblonga, circ. 3 mm longa, 1.2 mm lata, apice obtusa; styli 2, maxima parte connati; stigmata libera, incurva; ovarium oblongum, glabrum. Capsula 7 mm longa, 3-alata, ala una maxima depresso-deltoidea, 2—3 mm longa, reliquis alis duabus subaequalibus, glabris; semina numerosa, oblonga, brunneola, laevia.

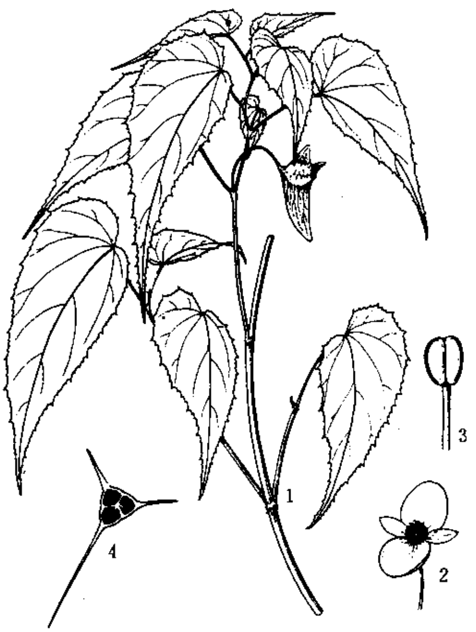


图1　黄连山秋海棠　1. 果株；2. 雄花；3. 雄蕊；4. 果横切面。（李锡畴绘）
Fig. 1　*Begonia coptidi-montana*　1. fruiting plant; 2. male flower; 3. stamen; 4. section of capsule.

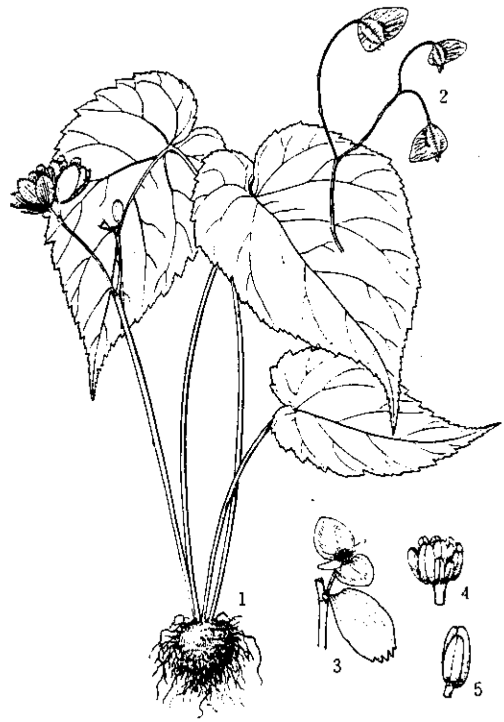


图4　齿苞秋海棠　1. 植株；2. 果序一部份；3. 雄花和苞片；4. 雄蕊群；5. 雄蕊（李锡畴绘）
Fig. 4　*Begonia dentato-bracteata*　1. habit; 2. a part of inflorescence; 3. male flower with bract; 4. stamens; 5. stamen.

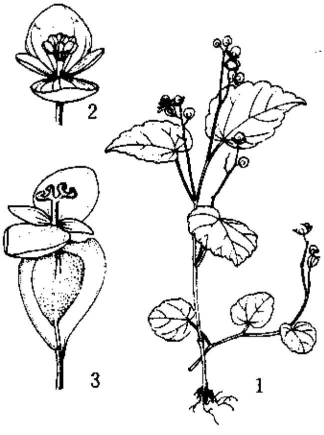


图2　小花秋海棠　1. 植株；2. 雄花；3. 雌花。（曾孝廉绘）
Fig. 2　*Begonia peii*　1. habit; 2. male flower; 3. female flower.

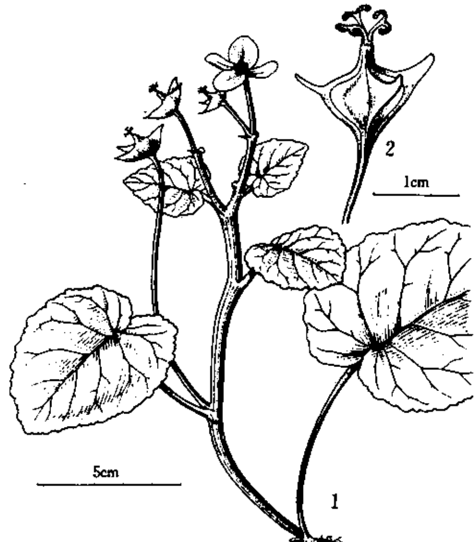


图3　册亨秋海棠　1. 植株；2. 果实。（冀朝祯绘）
Fig. 3　*Begonia cehengensis*　1. habit; 2. fruit.

Yunnan（云南）：Yiwu（易武），Manpei（曼丕），alt. 1000 m, on limestones，1959-09-07，P. J. Pei（裴盛基）59-9976（holotype，KUN）.

本种外形近似缅甸毛淡棉（Moulmein）所产的 *B. tricuspidata* C. B. Clarke，但果翅钝，而不具硬尖；又近似泰国产的 *B. saxifragifolia* Craib 但叶片不裂而不同。

3 册亨秋海棠 新种 图3

Begonia cehengensis Ku，sp. nov.（Sect. Begonia）

Similis *B. henryi* Hemsl.，quae foliis caulinis nullis，ovario in quoque loculo placentae segmento uno praedito vulgo villoso，ala capsulae una maxima differt.

Herba perennis，monoecia. Rhizoma globosum，interdum tuberiforme，6—8 cm diam.，radices numerosas inaequilongas edens. Caulis 10—16 cm altus，longitudinaliter angulatus subglaber. Folium basale vulgo unicum，petiolatum；laminae papyraceae，ambitu late ovatae vel suborbiculares，7—8 cm longae，circ. 6 cm latae，apice acutae，basi leviter obliquae，late rotundatae，margine irregulariter crenatae，supra virides，subglabrae vel sparsissime hispidulae，subtus luteo-virides，subglabrae，palmatim 7-nerves. nervis utrinque brunneolis；petioli 5—8 cm longi. conspicue longitudinaliter angulati，subglabri；stipulae membranaceae，caducae. Folia caulina 1—2，petiolata；laminae oblongo-ovatae，circ. 5 cm longae，2.4—2.9 cm latae，apice breviter acuminatae，basi conspicue obliquae，margine irregulariter denticulatae utrinque subglabrae；petioli 2—4 cm；stipulae caducae. Inflorescentia axillaris，2—4-florus. Flos staminatus：tapala 2，alba，semiorbicularia，circ. 8 mm longa，10 mm lata；stamina numerosa，filamentis circ. 1 mm longis，liberis，antheris obovoideis circ. 1 mm longis. Flos pistillatus：tepala 2，alba，inaequalia，unum semiorbiculare，circ. 8 mm longum，10 mm latum，apice rotundatum，basi cuneatum，alterum late ovatum，circ. 8 mm longum，6 mm latum，apice rotundatum；styli 2；stigmata torsiva，saepe spinulosa；ovarium obovoideum，apice rostratum，3-loculatum，in quoque loculo placentae segmentis 2 praeditum. Capsula circ. 1.5 cm longa，3 alata，alis subaequalibus depresse triangularibus circ. 5 mm longis；semina numerosa，brunneola，oblonga，laevia.

Guizhou（贵州）：Ceheng，（册亨）Huarong（花冗），alt. 750 m. 1958-11-01，Z. Y. Cao（曹子余）1258（holotype，PE）.

本种外形和独牛秋海棠 *B. henryi* Hemsl. 相近似，唯后者无茎生叶，子房被毛，胎座裂片1，果翅1个特大，易于区别。

4 齿苞秋海棠 新种 图4

Begonia dentato-bracteata C. Y. Wu，sp. nov.（Sect. Begonia）

Habitu *B. summoglabrae* similis，inflorescentiis dense bracteatis，bracteis obovatis，apice paucidentatis，staminibus paucioribus，filamentis connatis differt.

Herba perennis. Rhizoma subglobosum，1.5—1.9 cm diam.，radices numerosas tenues longas edens. Folia basalia，longe petiolata；laminae inaequilaterales，ambitu oblongo-ovatae vel oblongae，11—14 cm longae，6.9—8.8 cm latae，apice caudato-acuminatae，basi obliquae，latere angustiore rotundatae，latere latiore late auriculatae，margine inae-

qualiter serrulatae, serraturis saepe breviter aristatis, supra saturate virides, sparsissime hispidulae, subtus viridulae, ad nervos hispidulae, utrinque rubro-suffusae; petioli 13—16.5 cm longi, longitudinaliter angulati, rubrosuffusi, glabri vel subglabri; stipulae membranaceae, caducae. Scapus usque ad 26 cm altus; inflorescentia paniculiformis, multiflorae; bracteae 2—4 (—5), membranaceae, oblongae vel obovatae, 6—7 mm longae, apice (2—) 3—5-denticulatae, basi cuneatae, reticulatae; pedicelli 1.5—3 cm longi, glabri. Flos staminatus: tepala rosea, 4, 2 exteriora late ovato-orbicularia, 4—5 mm longa, 3—3.5 mm lata, apice rotundata, 2 interiora oblonga, 2.5 mm longa, circ. 1 mm lata, apice rotundata; stamina numerosa, filamentis connatis, antheris oblongis circ. 1 mm longis. Flos pistillatus ignotus. Capsula circ. 1 cm longa, apice breviter rostrata, inaequaliter 3-alata, ala una maxima oblique triangulari 7—13 mm longa 7—12 mm lata apice acuta vel obtusa conspicue reticulata, alis reliquis duabus minoribus inaequalibus, stylis persistentibus 3, liberis, stigmatibus persistentibus oblique orbicularibus, 3-loculata, in quoque loculo placentae segmentis 2 praedita; semina numerosa, brunneola, circ. 1 mm longa, laevia.

Yunnan (云南): Pianma (片马) alt. 1900 m, in broad-leaved forests, fl. pink, 1978-07-28, S. K. Wu (武素功) 1429 (holotype, KUN); ibidem, Gangfang (岗房), alt. 1600 m, on shady stony cliffs, 1939-02-19, F. Kingdon Ward 326 (fr. A).

本种外形近似光叶秋海棠 *B. summoglabra* Yu,但花序密被苞片,苞片倒卵形,顶端有数齿,雄蕊数目较少,花丝联合而不同。

5 心叶秋海棠 新种

Begonia glechomifolia C. M. Hu, sp. nov. (Sect. Begonia)

Habitu *B. henryi* Hemsl. similis, sed ovario 3-loculato in quoque loculo placentae segmentis duobus praedito differt.

Herba perennis. Rhizoma globosum, circ. 1.8 cm diam, radices tenues fibrosas edens. Caulis 18—25 cm altus, longitudinaliter angulatus, glaber vel subglaber. Folia basslia ignota. Folia caulina 1—2, longe petiolata; laminae subreniformes vel cordatae, 2.5—5.5 cm longae, 4—8.5 cm latae, apice rotundatae vel acutae, basi aperte cordatae vel profunde cordatae, margine inaequaliter simpliciter duplicateque denticulatae et inconspicue lobatae, supra brunneo-virides, subtus brunneolo-virides, utrinque subglabrae, nervis basalibus 5—7 supra inconspicuis subtus prominentibus; petioli 3—9 cm longi, longitudinaliter angulati, glabri vel subglabri; stipulae caducae. Cymae axillares, 2-florae: pedunculi 9—13 cm longi, longitudinaliter angulati, glabri; pedicelli 1—1.3 cm longi, glabri. Flores 1.5—1.8 cm diam. Flos staminatus: tepala 4, 2 exteriora oblonga vel late ovata, circ. 1.2 cm longa, 1 cm lata, apice rotundato-obtusa, 2 interiora obovata, circ. 7 mm longa, 5 mm lata, apice rotundata; stamina numerosa, filamentis liberis in corpus globosum confertis, antheris subglobosis circ. 0.8 mm longis. Flos pistillatus: tepala 3, 2 exteriora, late ovata, circ. 8 mm longa et lata, apice rotundata vel rotundato-obtusa, 1 internum oblongum, 5—6 longum, circ. 4 mm latum: styli 3; stigmata torsiva; ovarium oblongum. Capsula circ. 11 mm lon-

ga, 3-alata, ala una maxima falcata circ. 9 mm longa 0.6 mm lata, reliquis alis duabus parvis lunatis circ. 2 mm longis, 3-loculata, in quoque loculo placentae segmentis duobus praedita; semina numerosa, brunneola, oblonga, laevia.

Guangxi（广西）：Jinxiu（金秀）1934-06-27. S. S. Sin（辛树帜）23336（holotype, IBSC），23076；Xiangzhou（象州）. alt. 1000 m, on rocks, 1936-06-18, Z. Huang（黄志）39390.

本种外形和独牛秋海棠 *B. henryi* Hemsl. 很相似，但子房3室，胎座裂片2。两者易于区别。

6 膜果秋海棠 新种 图5

Begonia hymenocarpa C. Y. Wu, sp. nov. (Sect. Begonia)

Species habita *B. yunnanensi* Lévl. et Vant. similis, sed rhizomate elongato, foliis membranaceis oblique cordatis, inflorescentiis axillaribus, floribus minoribus, filamentis liberis, tepalis floris pistillati 4—5, capsulae alis horizontalibus subaequalibus differt.

Herba perennis. Rhizoma horizontale, teres, 4—6 mm crassum, ad nodos radices numerosas longas edens. Caulis erectus, 40—50 cm altus, longitudinaliter angulatus, glaber. Folia alterna, longe petiolata; laminae membranaceae, valde inaequilaterales. Longe ovatae, 6—11 cm longae, 4.5—7 cm latae, apice acuminatae vel caudato-acuminatae, basi obliquae, latere angustiore rotundatae vel truncatae, latere latiore auriculatae, auriculis 1.2—2.5 cm longis, margine irregulariter serrulatae, siccitate supra saturate virides, subtus pallidae, utrinque spinuloso-hispidulae, palmatim 5-nerves, costa media sub angolo recto cum petiolo patente; petioli 3.5—8 cm longi, glabri; stipulae membranaceae, caducae, Cyma (1—) 3—5-flora; bracteae ovato-lanceolatae, circ. 1.8 mm longae, ciliatae; pedicelli 4—7 mm longi, glabri. Flos staminatus: tepala 4, rosea, 2 exteriora majora, late oblato-ovata, 8—9 mm longa, 10—12 mm lata, apice rotundata, conspicue nervata, 2 interiora ovata, 5—6 mm longa, 3—4 mm lata, apice rotundata; stamina numerosa, in capitulum conferta, filamentis 1.1—1.5 mm longis, antheris oblongis 0.7—1 mm longis, connectivis haud projectis. Flos pistillatus: tepala 4, rosea, 2 exteriora majora, 2 interiora minora, inaequalia; styli 3, liberi; stigmata bifurcata, tortuosa. Capsula circ. 1.4 cm longa, 3-alata, ala una majore circ. 6 mm longa 5 mm lata, reliquis alis duabus minoribus subaequalibus, 3-loculata, in quoque loculo placentae segmentis 2 praedita; semina numerosa, brunneola, oblonga vel ovoidea.

Guangxi（广西）：Rongshui（融水），Sanfang（三防），Jiuwan Mt.（九万山），alt. 500—700 m, by streams in valley, 1958-07, S. Q. Chen（陈少卿）16309（holotype, KUN）; same locality, 1958-07, S. Q. Chen（陈少卿）14804, 15749, 16499.

本种可能和云南秋海棠 *B. yunnanensis* Lévl. et Vant. 外形近似，但根状茎伸长；叶膜质，斜心形；花序腋生，花较小，花丝离生；雌花被片4—5；果翅近等长，呈水平状。而区别于后者。

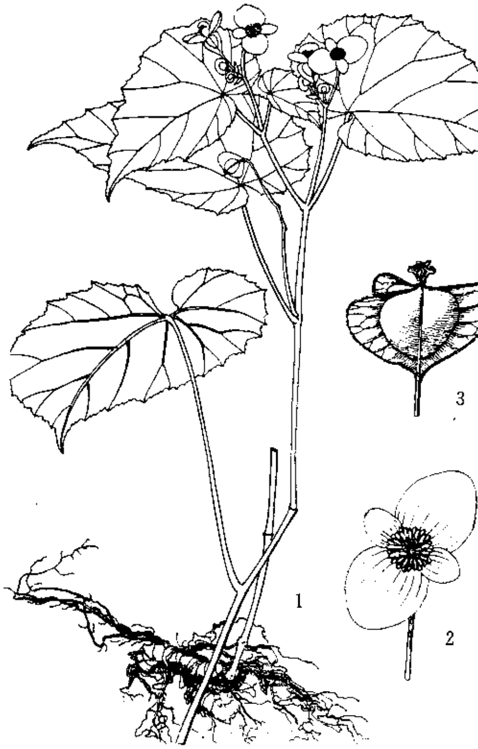


图5 膜果秋海棠 1.植株;2.雄花;
3.果实(曾孝廉绘)

Fig. 5 *Begonia hymenocarpa* 1. habit; 2. male flower;
3. fruit.

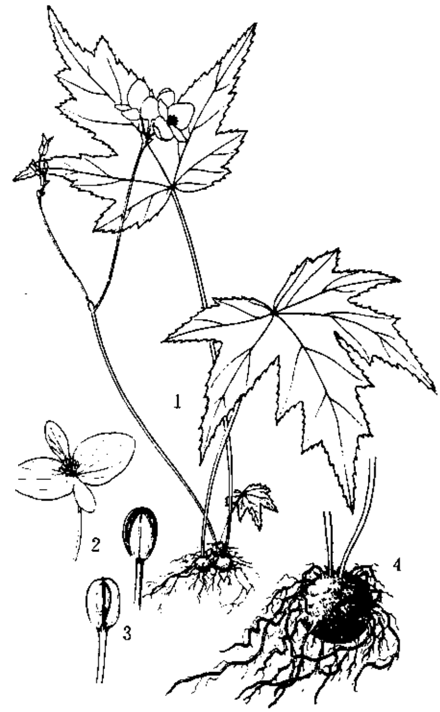


图6 石灰秋海棠 1.植株;2.雄花;3.雄蕊;
4.球茎(李锡畴绘)

Fig. 6 *Begonia lithophila* 1. habit; 2. male flower;
3. stamens; 4. corm.

7 石灰秋海棠 新种 图6

Begonia lithophila C. Y. Wu, sp. nov. (Sect. Begonia)

Species herba parva, foliis profunde 5—7-acuminato-palmatipartitis, eis *Aceris palmati* Thunb. similibus purpureo-variegatis, tepalis floris pistillati 3; fructus aliis dorsalibus attenuatis valde distinctis.

Herba perennis. Rhizoma globosum vel tuberculiforme, 8—15 mm crassum, radicas numerosas tenues longas edens. Folia omnia basalia, saepe 1—2, longe petiolata; laminae ambitu pentagonae, 5—17 cm longae, 3—17 cm latae, ad vel ultra medium 5-lobatae, lobo mediano oblongo-lanceolato 2—9 cm longo apice longe acuminato, lobis lateralibus minoribus lanceolatis, basalibus minimis ovato-lanceolatis apice acuminatis, margine lobulatae et sparse denticulatae, denticulis triangularibus apice breviter aristatis, in siccitite supra saturate virides, sparse crispule pubecentes, subtus purpureo-virides, subglabrae vel glabrae; petioli 2—12 cm longi, glabri vel subglabri; stipulae caducae. Scapus 12—18 cm altus, glaber vel subglaber; inflorescentia cymosa monoecia, 3—5-flora; bracteae et bracteolae oblongo-lanceolatae, 5—8 mm longae, margine glanduloso-ciliatae; pedicelli 1—1.8 cm longi, glabri. Flos

staminatus: tepala rubella, 4, 2 exteriora late ovata, 10—12 mm longa, 7—8 mm lata, apice rotundata vel obtusa, 2 interiora elliptica, circ. 10 mm longa, 3—4 mm lata, apice obtusa; stamina numerosa, in capitulum conferta, filamentis 1—13 mm longis parte maxima liberis, tantum basi connatis, antheris luteis obovoideis circ. 0.9 mm longis. Flos pistillatus: tepala rubella, 3, 2 exteriora late oblonga, circ. 10 mm longa, 8 mm lata, apice rotundata, 1 interius oblongum, circ. 7 mm longum, 2 mm latum, apice obtusum; ovarium cylindricum, glabrum, 3-loculatum, in quoque loculo placentae segmentis 2 praeditum; styli 3, circ. 1.5 mm longi, liberi vel tantum basi connati; stigmata tumida, revoluta, leviter torsiva. Capsula inaequaliter 3-alata, ala una maxima lanceolata usque ad 3 cm longa, apice obtusa conspicue reticulata, alis reliquis duabus minoribus, una triangulari circ. 6 mm longa apice obtusa alia circ. 3 mm longa, apice truncata; semina numerosa, brunneola, oblonga vel ovoidea, circ. 0.6 mm longa, laevia.

Yunnan (云南): Lunan (路南), Shilin (石林), alt. 2000 m, on rocks, 1956-08-26, K. M. Feng (冯国楣) s. n. (hologype, KUN); same locality, alt. 1783 m, 1990-11-06, Y. M. Shui (税玉民) 72 (fr.): same locality, alt. 1670 m, 1991-10-06, Y. M. Shui B91-650; Eshan Mt. (峨山), alt. 1750 m, on rocks, fl. pink 1958-10-03, S. K. Wu (武素功) 206; Yiliang (宜良), Z. H. Yang (杨宗海), alt. 1800 m, on limestone cava at hill-foot, B. Y. Qiu (邱炳云) 771073 (seedlings); Shiping (石屏), alt. 1300 m, A. Henry 13347 (E. Fide Irmsch. at *B. taliensis*).

该种叶片掌状5深裂,先端渐尖,极似鸡爪槭 *Acer palmatum* Thunb. 的叶,并具紫斑;雌花花被片3,大的果翅渐窄,在本属内极为特殊。

8 睫托秋海棠 新种 图7

Begonia pingbienensis C. Y. Wu, sp. nov. (Sect. Begonia)

Species *B. hymenocarpae* mihi arcte affinis, sed partibus omnibus pubescentibus, stipulis ciliato-fimbriatis, foliis irregulariter ciliato-denticulatis, capsulae alis acutiusculis differt.

B. pingbienensis var. **pingbienensis**

Herba perennis, Rhizoma horizontale vel obliquum, teres, 3—6 crassum, radices numerosas longas edens. Caulis decumbens, longitudinaliter angulatus brunneo-hispidus, inferne ad nodos radicans. Folia alterna, longe petiolata; laminae inaequilaterales, ambitu ovatae, 6.5—11 cm longae, 4—6.8 cm latae, apice caudato-acuminatae, basi obliquae, latere angustiore rotundatae vel subtruncatae, latere latiore auriculatae, auriculis 1—2 cm longis, margine irregulariter denticulatae, denticulis triangularibus apice breviter aristatis, interdum lobatae, siccitate supra saturate virides, sparse breviter hispidulae, subtus viridulae ad costas et nervos laterales hispidulae, nervis lateralibus conspicuis latere angustiore 4 (—5), latere latiore 5—6; petioli 5—9.5 cm longi, longitudinaliter angulati, crispule puberuli; stipulae membranaceae, lanceolatae, apice acuminatae, ciliatae, caducae. Cyma 2 (—4)-flora; bracreae caducae; pedicelli 1—2 cm longi, cum pedunculo pubescentes. Flos staminatus: tepala 4, rosea, 2 exteriora late ovata, 7—8 mm longa, 4—5 mm lata, apice rotundata, ex-

tus villosa, interiora ovata, exterioribus breviora; stamina numerosa, filamentis liberis, antheris oblongis. Flos pistillaus; tepala ut in flore staminato; styli 3 liberi; stigmata tortuosa. Capsula circ. 1 cm longa, hirsuta, 3-alata, alis duabus subaequalibus circ 8—9 mm longis, ala una minore; semina numerosa, oblonga, brunneola, laevia.

Yunnan (云南): Pingbian (屏边), alt. 1400 m, in woods, fl. pink, 1934-08-30, H. T. Tsai (蔡希陶) 61724 (holotype, KUN); same locality, alt. 1500 m, by stream. fl. pink, 1934-07-15, H. T. Tsai (蔡希陶) 62671 (KUN A); Malipo (麻栗坡), alt. 1000—1500 m, under evergreen forests, 1934-12-25, Vegetation group of Kunming Institute of Botany (昆明所地植物组)马 01-137.

本种以植株全部被短柔毛;托叶有流苏状毛;叶边有不规则带芒的细齿和蒴果的翅顶端略锐。在该组内很容易识别。

沙巴秋海棠(变种)

B. pingbienensis C. Y. Wu var. **angustior** C. Y. Wu, var. nov.

A var. *pingbienensi* recedit foliis angustioribus saepe lobulatis, pedunculis longioribus.

Vietnam (越南): Laoke (老街), Chapa (沙巴), alt. 240-1995 m by stream under forests, 1964-12-10, Sino-Vietnam Exped. (中越队) 295 (holotype, KUN).

本变种和原变种主要区别为叶片较窄,常具浅裂,总花梗较长。

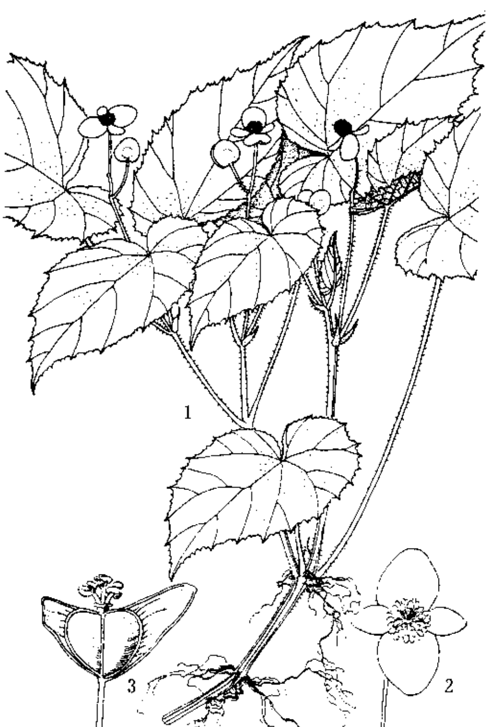


图7　睫托秋海棠　1. 花枝;2. 雄花;3. 果实。(曾孝廉绘)
Fig. 7　*Begonia pingbienensis*　1. flowering plant; 2. male flower; 3. fruit.

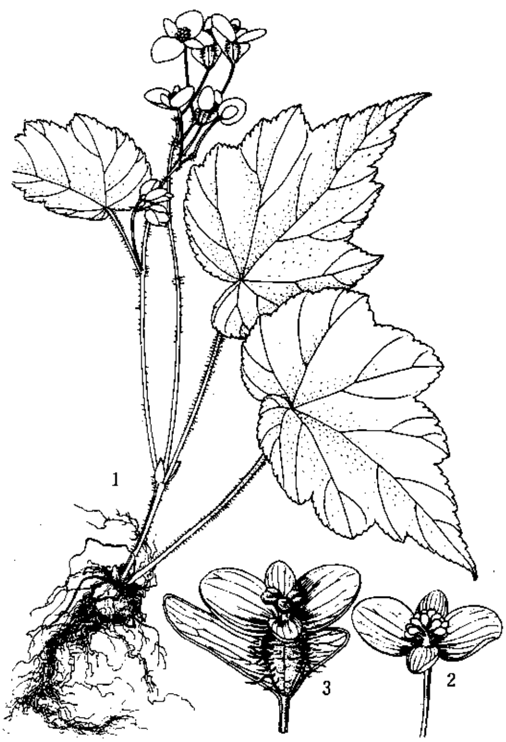


图8　红叶秋海棠　1. 植株;2. 雄花;3. 雌花。(曾孝廉绘)
Fig. 8　*Begonia rhodophylla*　1. habit; 2. male flower; 3. female flower.

9 红叶秋海棠 新种 图8

Begonia rhodophylla C. Y. Wu, sp. nov. (Sect. Begonia)

B. yuii Irmsch. similis, sed tepalis floris pistillati 3 (—4), foliis utrinque dense setulosis subtus pubescentibus, capsulae alis anguste falcatis differt.

Herba perennis. Rhizoma globosum, 1—1.5 cm diam., radices numerosae fibrosas edens. Caulis brevis, erectus, 3—5 cm altus, 1—2 mm crasus, 1—2-foliatus, saepe nullus. Folia basalia 1—2, longe petiolata; laminae inaequilaterales, ambitu oblique longe ovatae vel ovato-oblongae, 7—16.5 cm longae, 5.4—12.5 cm latae, apice acuminatae, basi latere angustiore rotundatae, latere latiore auriculatae, auriculis 1—1.2 cm longis, margine remote irregulariter argute serratae, serraturis apice breviter aristatis irregulariter leviter 5—7-lobatae, siccitate supra rubro-brunneae, sparse crispule albido-setulosae, subtus pallidae, crispule albido-setulosae, palmatim 6—7-nerves; petioli 7—20 cm longi, juventute dense crispule brunneolo-villosi, deinde glabrescentes; stipulae membranaceae, caducae. Folia caulina eis basalibus conformia, sed minora. Scapus 11—15 cm altus, sparse crispule brunneo-villosus. Monochasium compositum 6—8-florum; bracteae 1—3, membranaceae, brunneolae, oblongae, circ. 8 mm longae, 5 mm latae, apice acutae, margine aristato-denticulatae, extus villosae; pedicelli 8—18 mm longi, cum pedunculo subglabri. Flos staminatus: tepala 4, 2 exteriora majora, late ovata, 8—10 mm longa, 5—6 mm lata, apice rotundata, extus villosa, 2 interiora minora, oblonga, circ. 5 mm longa, 1.5 mm lata, apice rotundata; stamina circ. 15, filamentis liberis 0.5—1 mm longis, antheris oblongis vel obovoideis circ. 1 mm longis. Flos pistillatus: tepala 3 (—4), 2 exteriora majora, late ovata, 8—10 mm longa, 6—7 mm lata, apice rotundata, conspicue nervata, 1 interius late ovatum, 5—6 mm longum, 2.5—3 mm latum, apice rotundatum; styli 3, liberi, circ. 2 mm longi; stigmata bifurcata incurva; ovarium globosum villosum, 3-loculatum, in quoque loculo placentae segmentis 2 praeditum. Capsula 3-alata, ala una maxima anguste falcata usque ad 2.3 cm longa 8 mm lata, reliquis alis duabus minoribus forma variabilibus, glabra vel subglabra; semina numerosa, brunneola, oblonga vel ovoidea, 1—1.6 mm longa.

Yunnan(云南): Lunan (路南), Changhu (长湖), alt. 1800—2000 m, in mixed forests of limeston hills, fl. pink, leaves. purple beneath, 1984-08-02, Sino-Amrican Exped. (中美合作采集队)1577 (holotype, KUN, isotype, SA); same locality, alt. 1960 m, 1990-11-04, Y. M. Shui (税玉民) Lunan (路南)44; same locality, Haiyi (海邑), alt. 1900 m, 1991-10-07, Y. M. Shui (税玉民) B91-651。

本种的宿苞秋海棠 *B. yuii* Irmsch. 相近似,唯雌花被片3 (—4);叶两面密被刺毛,下面被柔毛;蒴果之翅窄镰刀状而不同。

10 藨状秋海棠 新种 图9

Begonia ruboides C. M. Hu, sp. nov. (Sect. Begonia)

A *B. limprichtii* Irmsch. et *B. duclouxii* Gagnep. differt ovario 3-loculato, in quoque loculo placentae segmentis 2 praedito.

Herba perennis, monoecia. Caulis repens, longitudinaliter multi-angulatus, ad nodos radicans, dense ferrugineo-hirsutus. Folia alterna, petiolata; laminae leviter inaequilaterales, ambitu suboriculares vel late ovatae, 2. 5—6 cm longae, 2—5 cm latae, apice rotundatae vel obtusae, basi obliquse, latere angustiore rotundatae, latere latiore auriculatae, margine remote denticulatae, denticulis triangularibus apice aristis 1. 5—2 mm longis munitis, supra brunneo-virides, sparse hirsutae, pilis usque ad 5 mm longis, subtus viridulae, ad nervos sparse hispidae, palmatim 6—7-nerves, nervis lateralibus subtus prominentibus; petioli 2—6. 5 cm longi, dense crispule brunneo-hirsuti; stipulae membranaceae, oblongae, 5—6 mm longae, apice acuminatae, integrae. Dichasium nonnulliflorum; bracteae ovato-lanceolatae, 8—10 mm longae, apice acuminatae, extus innterdum puberulae; pedicelli 1—2 cm longi, hirsuti. Flos staminatus: tepala 4, alba, 2 exteriora majora, late ovata, 15 mm longa, 14 mm lata, apice rotundata, 2 interiora oblongo-obovata, circ. 10 mm longa, 5—6 mm lata, apice rotundato-obtusa, basi cuneata; stamina numerosa, filamentis liberis circ.

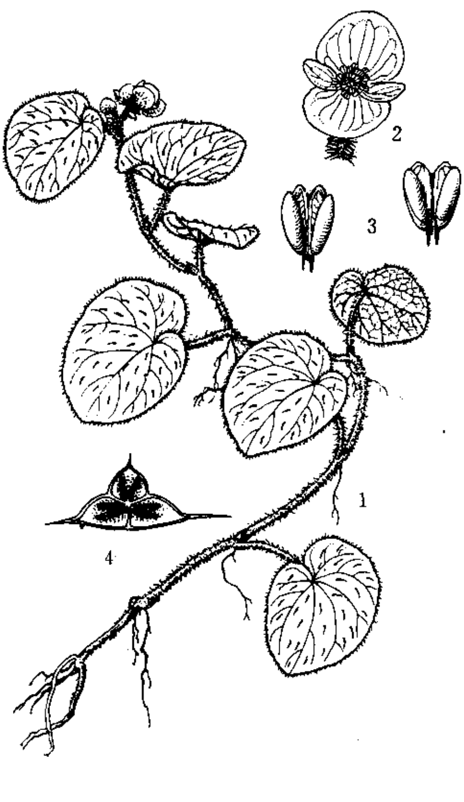


图9 藨状秋海棠 1. 植株;2. 雄花;3. 花药;4. 果横切面。(李锡畴绘)

Fig. 9 *Begonia ruboides* 1. habit; 2. male flower; 3. anther; 4. section of fruit.

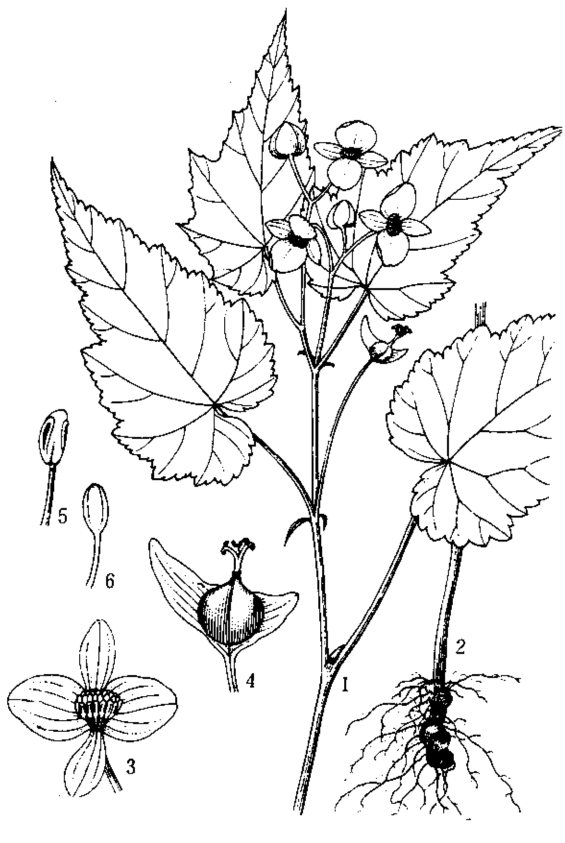


图10 文山秋海棠 1. 花枝;2. 根;3. 雄花;4. 果实;5—6. 雄蕊。(肖溶绘)

Fig. 10 *Begonia wenshanensis* 1. flowering plant; 2. root; 3. male flower; 4. fruit; 5—6. stamens.

1.2 mm longis in capitulum confertis, antheris oblongis circ. 0.9 mm longis. Flos pistillatus: tepala 4, alba, 2 exteriora late ovata, 8—10 mm longa, 2 interiora ignota; pistillum pubescens. Capsula circ. 1 cm longa, 3-alata, una maxima longe triangulari circ. 10 mm longa brunneo-pubescenti, reliquis alis duabus minoribus breviter triangularibus 4—6 mm-longis pubescentibus, 3-loculata, in quoque loculo placentae segmentis 2 praedita; stigmata persistentia torsiva; semina numerosa, brunneola, oblonga, laevia.

Yunnan (云南): Pingbian (屏边), Yaoshan Mt. (瑶山). Chongtou (冲头), Dazhupeng (大竹棚), alt. 1300 m. in sparse woods, 1954-04-10, P. Y. Mao (毛品一) 3761 (holotype, KUN. isotype PE); same locality, 1953-04-15, P. Y. Mao (毛品一) 2541; same locality, 1954-03-18, P. Y. Mao (毛品一) 3467; Jinping (金平), alt. 2200 m, 1956, Sino-Russian Exped. (中苏队) 1165.

本种以子房3室2胎座裂片而区别于蕺叶秋海棠 *B. limprichtii* Irmsch. 和川边秋海棠 *B. duclouxii* Gagnep.。

11 文山秋海棠 新种 图10

Begonia wenshanensis C. M. Hu, sp. nov. (Sect. Begonia)

Species *B. clavicauli* Irmsch. affinis, sed pedicellis longioribus 1—2.8 cm longis floris pistillatae tepalis 3, capsulis 3-alatis, alis omnibus falcatis differt.

Herba perennis. Rhizoma teres, 8—10 mm crassum, noduliforme, radices numerosas longas edens. Caulis 30—39 cm altus, longitudinaliter angulatus, subglaber. Folia basalia ignota. Folia caulina nonnulla, alterna, longe petiolata; laminae inaequilaterales, ambitu triangulari-ovatae, 7—12 cm longae, 4.5—7 cm latae, apice acuminatae vel caudato-acuminatae, basi obliquae, latere angustiore rotundatae vel subtruncatae, latere latiore auriculatae, auriculis 8—15 mm longis, margine irregulariter simpliciter vel duplicato denticulatae, denticulis triangularibus, lobatae, supra saturate virides, sparse minute adpresse-puberulae, subtus viridulae, glabrae vel ad nervos sparse hispidulae, nervis utrinque prominentibus; petioli 2—9 cm longi, longitudinaliter angulati; stipulae membranaceae, ovato-lanceolatae vel oblongae circ. 7 mm longae, apice rotundata-obtusae, subglabrae, caducae. Cyma 2—3-flora; pedunculus 3.5—4.5 cm longus, cum pedicellis glaber vel subglaber; bracteae membranaceae, lanceolatae, 6—8 mm longae; pedicelli 1—2 cm longi. Flos staminatus: tepala 4, rosea, 2 exteriora longe ovata, 1—1.3 cm longa, apice rotundato-obtusa, extus ad basin villosa, 2 interiora minora, elliptica circ. 3 mm longa, 1.5 mm lata, apice rotundato-obtusa; stamina numerosa, filamentis 2 mm longis, infra medium connatis, antheris oblongis circ. 0.8 mm longis. Flos pistillatus: tepala 3, rosea, 2 exteriora late ovata, circ. 1 cm longa, 9 mm lata, apice rotundata, extus glabra, 1 interius ellipticum, circ. 5 mm longum, 2 mm latum; ovarium subglobosum, 3-loculatum, in quoque loculo placentae segmentis 2 praeditum; styli 3; stigmata tumida, papillata. Capsula 8—10 mm longa, 3-alata, ala una maxima longe triangulari usque ad 1 cm longa, reliquis alis duabus minoribus conformibus; semina numerosa, brunneola, oblonga, laevia.

Yunnan (云南): Wenshan Mt. (文山), alt. 2200 m, in mixed forests, 1947-08-17, K. M. Feng (冯国楣) 11323 (holotye, PE; isotype KUN); same locality, Laojun Mt. (老君山), alt. 1800—2200 m, in mixed forests, 1947-08-12, K. M. Feng (冯国楣) 11106; Funing (富宁), Lida (里达), Ligong (里拱), alt. 1290 m, in moist evergreen forests, 1964-10-12, Q. A. Wu *et al.* (武全安等) 9594; same locality, Ligong (里拱), Houlong Mt. (后龙山), alt. 1410 m, by streams under forests, 1965-10-29, Wenshan Exped. (65-文山组) 65-177.

本种近似腾冲秋海棠 *B. clavicaulis* Irmsch. 唯本种花梗长1—2.8 cm，雌花花被片3，蒴果3翅均呈镰刀状而不同。

12　兴义秋海棠　新种

Begonia xingyiensis Ku, sp. nov. (Sect. Begonia)

Habitu *B. cehengensi* Ku similis, sed foliis utrinque plus minusve sparse villosis, basi haud conspicue obliquis, margine serraturis triangularibus apice saepearistatis praeditis, folio caulis nullo differt; autem *B. henryi* Hemsl. similis, quae ovario oblongo saepe brunneo-pubescenti, foliis basi conspicue obliquis aperte cordatis recedit.

Herba perennis. Rhizoma globosum, 6—10 mm diam., radices numerosas inaequilongas edens, squamis emarcidis paucis praeditum. Folia omnia basalia, longe petiolata; laminae papyraceae, late ovatae, 4.5—6 cm longae et latae, apice obtusae, basi haud conspicue obliquae, subcordatae, margine inaequaliter duplicato vel simpliciter denticulatae, denticulis apice saepe aristatis, supra saturate virides, utrinque sparse villosae, nervis basalibus 7—9 supra inconspicuis subtus brunneolis prominentibus; petioli 4—4.5 cm longi, longitudinaliter angulatis, crispule villosi; stipulae membranaceae, caducae. Scapus 4—8 cm altus, pilosus; monochasium 2-florum, nonoicum. Flores purpureo-albi. Flos staminatus: tepala 4 (—3). 2 exteriora late ovata vel obovata, 8—9 mm longa, 5 mm lata, apice rotundata, basi subcordata, 2 interiora obovato-oblonga, circ. 7 mm longa, 4 mm lata, apice rotundata, basi late cuneata; stamina numerosa; filaments circ. 0.8 mm longis inferne connatis, partibus liberis 0.5 mm longis, antheris oblongis circ. 0.5 mm longis. Flos pistillatus: tepala 2, semiorbicularia, circ. 5 mm longa, 7 mm lata, apice rotundata, basi subcordata; styli 3, partibus mojoribus connati; stigmata spiniformia.

Guizhou (贵州): Xingyi (兴义), Yangping (洋坪), Bajiaotang (芭蕉塘), alt. 1100 m, on rocks in valley, 1959-08-07, Anshun Exped. (安顺队) 748 (holotype, PE).

本种外形和册亨秋海棠 *B. cehengensis* Ku 相似，唯叶片两面或多或少散生长柔毛，叶边为锐而浅三角形的齿，齿尖带芒，基部不明显偏斜，并不具茎生叶；又和独牛秋海棠 *B. henryi* Hemsl. 近似，唯后者子房长圆形，通常被褐色柔毛，叶基部明显偏斜，张开心形。

13　信宜秋海棠　新种　图11

Begonia xinyiensis Ku, sp. nov. (Sect. Begonia)

Habitu smilis *B. fordii* Irmsch., sed foliis subcoriaceis margine sparse dentatis supra subglabris subtus glabris vel sparsissime puberulis, floribus majoribus, floris staminati tepalis

externis duobus 1.8—2 cm longis 1.3 cm latis extus glabris vel subglabris, eis internis duobus oblongis 9—10 mm longis 3—4 mm latis extus glabris, bracteis ut bracteolis 4—5 recedit.

Herba perennis, humilis, dioecia, Rhizoma breve, teres, circ. 1 cm longum, 4 mm diam., dense nodosum, ad nodos squamis praeditum et radices numerosas fibrosas longas edens. Caulis brevis, 8—10 cm altus. Folia basalia 1—2, longe petiolata; laminae subcoriaceae, inaequilaterales, ambitu oblique ovatae, 8—9 cm longae, 5.5—6.5 cm latae, apice breviter caudatae, basi obliquae, aperte cordatae, lobo lateris angustioris rotundato, eo lateris latioris 1.5—2 cm longo, margine sparse inaequaliter denticulatae, dentibus apice breviter aristatis, in siccitate supra brunneo-virides, subglabrae, subtus brunneolo-viridulae, glabrae vel subglabrae; petioli 7—8 cm longi, sparse puberuli, sed prope apicem pilis densioribus tecti; stipulae membranaceae, lanceolatae, circ. 11 mm longae, apice acuminatae, arista 2 mm longa praeditae, glabrae. Scapus 8—10 cm altus, floribus staminatis duobus praeditus; involucri bracteae 4—5, membranaceae, lanceolatae vel ovato-lanceolatae, 10—15 mm longae, apice acuminatae, glabrae; pedicelli circ. 2 cm longi, superne crispule puberuli; bracteolae membranaceae, lanceolatae, 9—12 mm longae, apice acuminatae, glabrae; tepala 4, purpurascentia, 2 exteriora ovato-triangularia, 1.8—2 cm longa, circ. 1.3 cm lata, apice obtusa, glabra, conspicue nervosa, 2 interiora oblonga, 9—10 mm longa, 3—4 mm lata, apice obtusa; stamina numerosa, filamentis inaequilongis 0.8—1 mm longis antheris oblongis circ. 2.2 mm longis apice acutis. Planta pistillata ignota.

Guangdong (广东): Xinyi (信宜), by stream in valley, 1931-03-21, Z. Huang (黄志) 31748 (holotype, PE).

本种外形和西江秋海棠 *B. fordii* Irmsch. 极近似，唯本种叶片近革质，边缘三角形齿大而疏，上面近无毛，下面无毛或被极疏而短的毛；花直径大，雄花被片外面2枚长1.8—2 cm，宽约1.3 cm，外面无毛或近无毛，内面2枚长圆形，长9—10 mm，宽3—4 mm，外面无毛；苞片和小苞片均4—5枚而不同。

14 习水秋海棠 新种

Begonia xishuiensis Ku, sp. nov. (Sect. Begonia)

Habitu *B. summoglabrae* Yü similis, sed foliis suborbicularibus, supra medium lobatis, palmatim 7-nervibus, floris staminati vel pistillati tepalis duobus recedit.

Herba perennis. Rhizoma globosum, circ. 1.5 cm diam., radices numerosas fibrosas densas edens. Folium basale 1, longe petiolatum, glabrum; lamina leviter inaequilateralis. suborbicularis, circ. 15 cm longa, 16 cm lata, apice acuminata vel acuta, basi leviter obliqua, subcordata, margine sparse denticulata, denticulis triangularibus, supra medium vel supra partes duae tertiae inaequaliter lobata, lobis ovatis vel ovato-lanceolatis 3.8—4 cm longis, siccitate supra brunneo-rubra, subtus pallidior, palmatim 7-nervis, nervis utrinque prominentibus; petiolus circ. 14 cm longus, longitudinaliter angulatus; stipulae caducae. Scapus monoicus, circ. 32 cm altus, glaber; cyma quater dichotoma. Flores rosei; bracteae

membranacei, laceolatae, circ. 2 mm longae, apice obtusae caducae; pedicelli circ. 5 mm longi, glabri. Flos staminatus: tepala 2, late ovata, 6—7 mm longa et lata, apice rotundata, basi subcordata, margine remote leviterque denticulata; stamina 11—14, filamentis liberis 0.5—1.5 mm longis inaequilongis, antheris obovoideis vel subglobosis circ. 0.8 mm longis apice emarginatis. FLos pistillatus: pedicelli circ. 1.5 cm longi glabri; bracteae membranacei. lanceolatae vel ovato-lanceolata, caducae, tepala 2, semiorbicularia, circ. 7 mm longa, 6 mm lata, margine remote leviterque denticulata apice rotundata; styli 3; stigmata globosa; ovarium 3-alatum, alis subaequalibus. Fructus ignotus.

Guizhou (贵州): Xishui (习水), Changkan (长嵌). alt. 480 m, on shady and wet rocks, 1965-05-28, collector unknown (采集人不详) n. 311 (holotype, HGAS).

本种外形和光叶秋海棠 *B. summoglabra* Yü 近似,但叶片近圆形,中部以上线裂,脉掌状7条,雌雄花被片均为2。

15 短刺秋海棠 新种 图12

Begonia brevisetulosa C. Y. Wu, sp. nov. (Sect. Platycentrum Klotzsch)

Species *B. limprichtii* Irmsch. affinis, sed herba dioecia, foliis supra subdense breviter setulosis differt.

Herba perennis, acaulescens. Rhizoma teres, transverse repens, 5—8 mm diam., ad nodos radices numerosas tenues longas brunneas edens. Folia omnia basalia, longe petiolata; laminae leviter inaequilaterales, oblongo-ovatae, 5.5—12 cm longae, 3.5—10.2 cm latae, apice caudato-acuminatae, basi obliquae, latere angustiore rotundatae vel breviter auriculatae, latere latiore auriculatae, auriculis 5—14 mm Longis, margine inaequaliter argute serratae, serraturis apice breviter aristatis, interdum supra medium lobatae, siccitate supra luteo-virides, dense crispule setulosae, subtus pallidae, sparse sed ad nervos densius setulosae, palmatim 6—7-nerves, nervis lateralibus prominentibus brunnesis in latere angustiore 3—4, in latere latiore 5—6; petioli 4.5—11 cm longi, rubro-suffusi, longitudinaliter angulati, dense crispuleque brunneo-hirsuti; stipulae membranaceae, caducae. Scapus 10.2—12.5 cm altus, longitudinaliter angulatus, dense crispule brunneo-hirsutus, basi squamis membranaceis brunneis ovatis 8 mm longis 4 mm latis apice acuminatis extus crispule brunneo-hirsutis circumcinctus; cyma 2—3 (—4)-flora; pedicelli 1.8—2 cm longi, subglabri. Flos staminatus: tepala 4, 2 exteriora late ovata circ. 1.2 cm longa, 8 mm lata, apice rotundata, extus basi hirsuta, 2 interiora oblonga, circ. 8 mm longa, 3 mm lata, apice rotundata; stamina numerosa, filamentis liberis circ. 1 mm longis in corpus capitatum confertis, antheris oblongis circ. 1 mm longis, connectivis projectis. Flos pistillatus ignotus. Capsula 1.5—1.8 cm longa, sparse puberula, 3-alata, ala una maxima ovato-lanceolata circ. 1.5 cm longa 1 cm lata apice rotundata, conspicue nervosa, reliquis alis duabus minoribus inaequalibus plerumque semioribcularibus, 2-loculata, in quoque loculo placentae segmentis duobus praedita; semina numerosa, brunneola, oblonga, laevia.

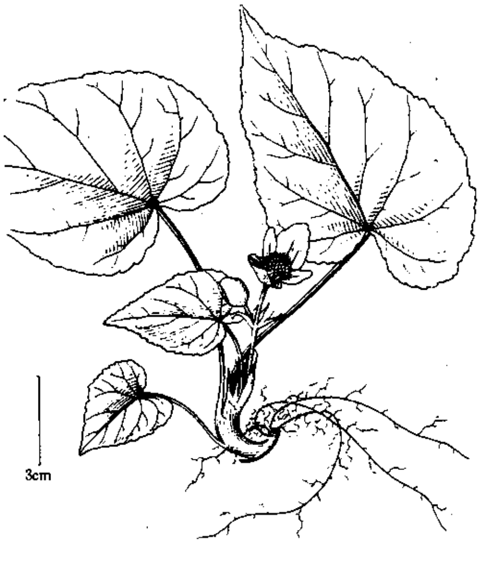


图11 信宜秋海棠 植株。(冀朝祯绘)
Fig. 11 *Begonia xinyiensis* habit.

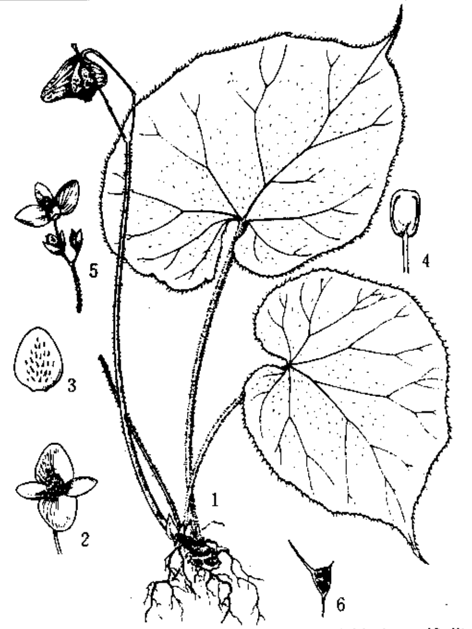


图12 短刺秋海棠 1. 植株；2. 雄花；3. 外花被片；4. 雄蕊；5. 雄花序；6. 果实横切面。(李锡畴绘)
Fig. 12 *Begonia brevistulosa* 1. habit; 2. male flower; 3. outer tepal; 4. stamen; 5. male inflorescence; 6. section of fruit.



图14 瓜叶秋海棠 1. 植株；2. 果实；3. 果横切面。(曾孝廉绘)
Fig. 14 *Begonia cucurbitifolia* 1. habit; 2. fruit; 3. section of fruit.

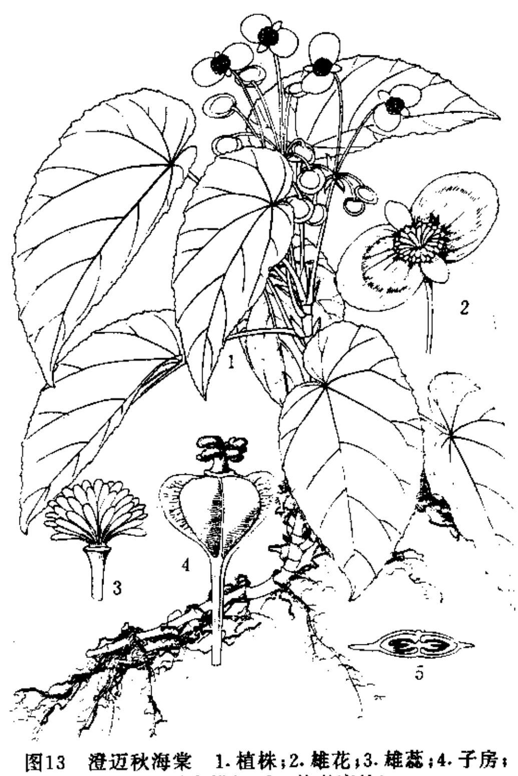


图13 澄迈秋海棠 1. 植株；2. 雄花；3. 雄蕊；4. 子房；5. 子房横切面。(曾孝廉绘)
Fig. 13 *Begonia chuniana* 1. habit; 2. male flower; 3. stamens; 4. ovary; 5. section of ovary.

Sichuan (四川): Muli (木里), 1959, S. K. Wu (武素功) 1425 (holotype, KUN)

本种外形近似蕺叶秋海棠 *B. limprichtii* Irmsch. 唯雌雄异株;叶片上面被较密的短刺毛而不同。

16　赤水秋海棠　新种

Begonia chishuiensis Ku, sp. nov. (Sect Platycentrum Klotzsch.)

Species *B. smithianae* Yü ex Irmsch. affinis, sed foliis longe ovatis vel late ovato-lanceolatis, margine leviter triangulariter denticulatis differt.

Herba perennis. Rhizoma teres, transverse repens, 4—6 mm diam., brunneum, radices numerosas tenues longas edens. Folia omnia basalia, longe petiolata; laminae leviter inaequilaterales vel subaequilaterales, longe ovatae vel ovato-lanceolatae, 4.5—10 cm longae, 3—5 cm latae, apice caudato-acuminatae, basi subcordatae, margine crenatae. crenis triangularibus, vel incisae, siccitate supra brunneo-virides, hispidulae et sparse hirsutae, subtus brunneo-virides, subglabrae, ad nervos hirsutae, nervis basalibus 5—6 supra inconspicuis subtus brunneis prominentibus; petioli 6—9 cm longi, longitudinaliter angulati, dense crispuleque brunneo-hirsuti; stipulae membranaceae, caducae. Scapus 9—15 cm altus, remote crispuleque brunneo-hirsutus; cyma 2—4-flora; flores albi. Flos staminatus: tepala 2, late ovata, circ. 10 mm longa, 9 mm lata; stamina numerosa, filamentis liberis circ. 1 mm longis; antheris oblongis circ. 1 mm longis in corpus globosum confertis. Flos pistillatus: tepala 2, oblongo-obovata, 1.6 cm longa, circ. 1 cm lata; ovarium 2-loculatum, in quoque loculo placentae segmentis 2 praeditum; styli 2; stigmata torsiva, apice spinulosa. Capsula circ. 1 cm longa, 3-alata, ala una maxima late falcata circ. 1.3 cm longa 8 mm lata apice rotundato-obtusa, reliquis alis duabus subaequalibus semiorbicularibus circ. 4 mm longis; semina numerosa, brunneola, oblonga, laevia.

Guizhou (贵州): Chishui (赤水), on moist rocks, 1959-09-15, Bijie Exped. (毕节队) 1404 (holotype, PE).

本种外形和长柄秋海棠 *B. smithiana* Yü ex Irmsch. 相近似,唯叶片长卵形或卵状宽披针形,边缘有三角形浅齿或呈缺刻状,而易于识别。

17　澄迈秋海棠　新种　图13

Begonia chuniana C. Y. Wu, sp. nov. (Sect. Platycentrum Klotzsch)

B. handelii auct. non Irmsch.: Fl. Hainan. **1**:487. 1964; L. Liou in Iconogr. Corm. Sin. Suppl. **2**: 541. fig. 8913, in clav. 1983. p. p. quoad pl. Hainan.

Species *B. handelii* Irmsch. probabiliter affinis, sed foliis et floribus multo minoribus, tepalis floris staminati usque ad 1—1.6 cm longis, pistillo tantum bicarpellato anguste alato differt.

Herba perennis, dioecia. Rhizoma obliquo-horizentale, ad nodos squamis membranaceis praeditum et radices numerosas tenues longas édens. Caulis abbreviatus. Folia longe peteolata; laminae inaequilaterales, ambitu ovato-lanceolatae, 6—11 cm longae 3.5—5 cm latae,

apice acuminatae, basi cordatae, latere angustiore rotundatae, latere latiore semirotundatae, auriculis usque ad 2—3 cm longis, margine remote denticulatae, denticulis triangularibus apice breviter aristatis, siccitate supra saturate virides, subglabrae, subtus viridulae, sparae hispidulae, ad nervos densius hispidulae, nervis utrinque conspicue prominentibus; petioli 5—9 cm longi, crispule brunneo-pubescentes; stipulae membranaceae, ovato-lanceolatae, circ. 10 mm longae, 5 mm latae, apice acuminatae, caducae. Inflorescentia staminata usque ad 8-flora, paniculiformis, 7—10 cm longa; bracteae et bracteolae membranaceae, lanceolatae, 8—10 mm longae, apice acuminatae, margine saepe sparse denticulatae; pedicelli 1.5—1.8 cm longi. Flos staminatus: tepala 4, alba, 2 exteriora majora, longe ovata vel oblonga 15—17 mm longa, 10—13 mm lata, apice rotundata, 2 interiora minora, oblonga, 4—5 mm longa, 2—3 mm lata, apice rotundato-obtusa; stamina numerosa, filamentis liberis 1.5—2.5 mm longis, antheris luteis oblongis vel obovato-oblongis, circ. 1.5 mm longis, connectivis inconspicuis. Inflorescentia pistillata saepe floribus 2—4 praedita; bracteae et bracteolae membranaceae, lanceolatae, 6—9 mm longae, 2—3.5 mm latae, apice acuminatae, caducae; pedicelli 1.5—2.6 cm longi, glanduloso-pubescentes. Flos pistillatus: tepala alba, 4, 2 exteriora late ovata, 10—12 mm longa, 8—9 mm lata, apice rotundata vel obtusa, 2 interiora oblonga, 7—8 mm longa, 3—4 mm lata, apice obtusa; styli 2, stigmata divisa, spiraliter revoluta. Capsula longa, subaequaliter 3-alata, alis 2-loculata, in quoquo loculo placentae segmentis 2 praedita; semina numerosa, brunneola, oblonga, circ. 0.5 mm longa, laevia.

Hainan (海南): Chengmai (澄迈), Baishiling Mt. (白石岭) in forests, fl. white, 1933-03-12, C. I. Lei 441 (holotype, KUN, isotype PE A. GH); Baisha (白沙), fl yellow 1936-04-14 X. Q. Liu (刘心祁) 26261 (A).

该种可能和香秋海棠 *B. handelii* Irmsch. 较相近,但叶片和花远较小,雄花被片长达 1—1.6 cm,雌花心皮2,具窄翅。

18 瓜叶秋海棠 新种 图14

Begonia cucurbitifolia C. Y. Wu, sp. nov. (Sect. Platycentrum Klotzsch)

Species foliis subcoriaceiseis *Hodgsoniae macrocarpae* (Bl.) Cogn. verosimilibus glaberrimis (nervibus subtus ad basin paucissime setulosis exceptis), floribus 4.5 cm latis albis, alis capsularum crassis obtusis reticulatis insignis.

Herba perennis. Rhizoma robustum, horizontale, teres, 8—11 mm crassum, moniliforme, ad nodos radicans. Caulis abbreviatus, circ. 4 cm altus. longitudinaliter angulatus, glaber. Folia basalia 3, longe petiolata; laminae subcoriaceae, ambitu suboribiculares, 14—16.2 cm longae, 14—16 cm latae, apice acuminatae vel caudatae, basi subcodatae vel subrotundatae, margine remote serratae et 3 (—4)-lobatae, lobo mediano oblongo-lanceolato 9—10.5 cm longo 4.5—5.5 cm lato, lobis lateralibus ovato-oblongis 5—8.5 cm longis 4—6 cm latis, siccitate supra saturate virides, subtus viridulae, utrinque subglabrae, palmatim 3—4-nervatae; petioli 22—26 cm longi, longitudinaliter lateque angulati, glabri; stipulae mem-

branaceae, lanceolatae, circ. 12 mm longae, caducae. Folia caulina eis basalibus conformia, sed brevius petiolata, petiolis circ. 16 cm longis. Scapus circ. 29 cm altus, longitudinaliter angulatus, subglaber. Inflorescentia bis dichotoma, 4-flora; pedunculus 25 mm longus, glaber; bracteae caducae; pedicelli circ. 15 mm longi, glabri. Flos staminatus: tepala 4, alba, 2 exteriora majora, longe ovata vel triangulari-ovata, circ. 25 mm longa, 13 mm lata, apice obtusa, 2 interiora minora, oblonga, circ. 15 mm longa, 5 mm lata, apice acuta. Flos pistillatus ignotus. Capsula magna, circ. 1.7 cm longa, glabra, inaequaliter 3-alata, ala una maxima ovato-oblonga circ. 17 mm longa 14 mm lata apice subrotundata conspicue reticulata, alis reliquis duabus subaequalibus lunatis circ. 5—7 mm longis apice rotundatis, 2-loculata, in quoque loculo placentae segmentis 2 praedita; semina numerosa, brunneola oblonga, 1—1.5 mm longa, laevia.

Yunnan (云南):Hekou (河口),Xiaonanxi (小南溪), Majiahe (马家河),alt. 430 m, on rocks under dense forests in limestone hills, 1991-03-22, Y. M. Shui (税玉民) B91-08 (holotype, KUN); Hekou (河口) under dense forests in valley, 1956-06-08, Sino-Russ. Exped. (中苏队) 2318.

该种的叶近草质,确实和油瓜 *Hodgsonia macrocarpa* (Bl.) Cogn. 的叶外形很相似,但叶片无毛(除背面叶脉基部略有刺毛外);花直径4.5 cm,白色;蒴果的翅粗壮,顶端钝,具网脉。极易识别。

19　矮小秋海棠　新种　图15

Begonia fengii Ku, sp. nov. (Sect. Platycentrum klotzsch)

Similis *B. peii* C. Y. Wu, sed rhizomate tereti prostrato radicante, foliis caulinis vulgo nullis, foliorum dentibus densis triangularibus apice pungentibus differt.

Herba perennis, 4—7 cm alta. Rhizoma teres, circ, 4 mm diam., curvatum, laxe nodosum, ad nodos radicans, radicibus numerosis fibrosis intertextis. Folia basalia et caulina conformia, longe petiolata; laminae leviter inaequilatrales, ovatae, 1.8—2.5 cm longae, 1.5—2 cm latae, apice breviter caudatae, basi subcordatae, margine duplicato-serratae, dentibus triangularibus apice pungentibus breviter aristatis, supra saturate virides, sparae hirtellae, subtus viridulae, hirtellae, ad nervos pilis densioribus, penninerviae, nervis subtus conspicue prominentibus; petioli 2.5—5 cm longi, crispule puberuli; stipulae membranaceae, lanceolatae, caducae. Scapus 4—5 cm altus, puberulus, 2-florus; bracteae membranaceae, ovato-lanceolatae, 3—4 mm longae, apice obtusae, caducae; pedicelli 11 mm longi, brunneo-puberuli. Flores pistillati et staminati ignoti. Capsulae pendulae, obovoideae, 5—6 mm longae, brunneo-puberulae, 3-loculatae, in quoque loculo placentae segmentis 2 praedita, 3-alatae, ala una majora 5—6 mm longa, alis ceteris duabus subaequimagnis 4—5 mm longis, omnibus oblique triangularibus sparse puberulis; pedicelli fructiferi 1.3 cm longi, brunneo-puberuli; semina numerosa, oblongae, brunneola, laevia.

Yunnan (云南): Malipo (麻栗坡), Laojun Mt. (老君山), alt. 1600 m, on rocks in broad-leaved forest by stream in valley, 1962-05-30, K. M. Feng (冯国楣) 22990 (holo-

type, PE).

本种外形近似小花秋海棠 *Begonia peii* C. Y. Wu,但根状茎圆柱形,铺地生根,通常无茎生叶,叶边锯齿密而尖锐呈三角形。极易区别。

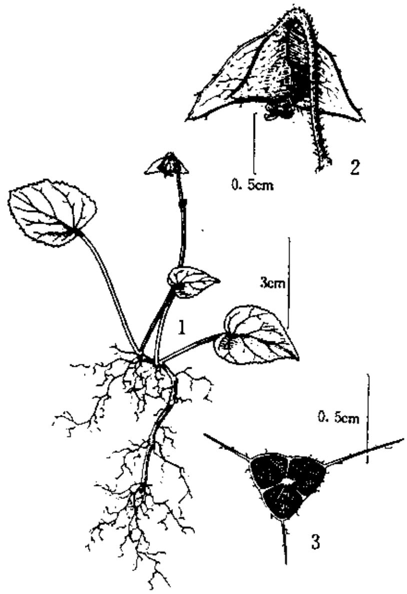


图15 矮小秋海棠 1.植株;2.果实;3.果横切面。(冀朝祯绘)
Fig. 15 *Begonia fengii* 1. habit; 2. fruit; 3. section of fruit.

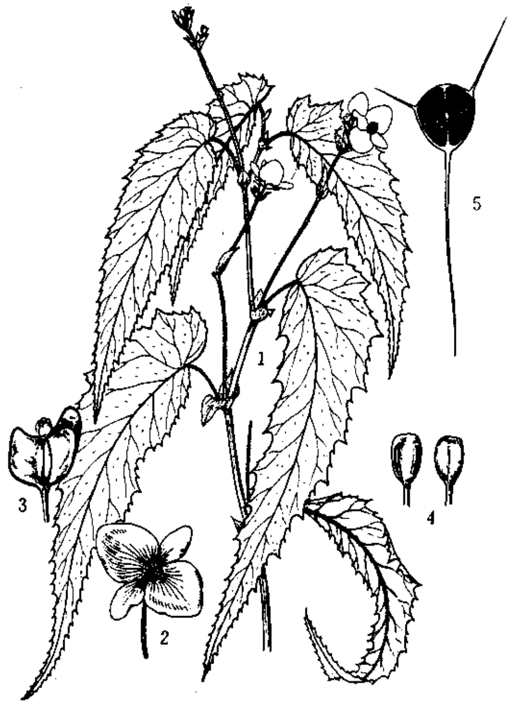


图16 贡山秋海棠 1.植株;2.雄花;3.幼果;4.雄蕊;5.果横切面。(李锡畴绘)
Fig. 16 *Begonia gungshanensis* 1. habit; 2. male flower; 3. young fruit; 4. stamens; 5. section of fruit.

20 贡山秋海棠 新种 图16

Begonia gungshanensis C. Y. Wu, sp. nov. (Sect. Platycentrum Klotzsch)

Arcte affinis *B. taiwanianae* Hayata, sed foliis falcatis irregulariter dupliciter dentatis, nervulis conspicuis differt.

Herba perennis. Rhizoma obliquum tortuosum, noduliforme, ad nodos radicans. Caulis usque ad 90 cm altus, longitudinaliter angulatus, glaber vel subglaber. Folia alterna, petiolata; laminae inaequilaterales, ambitu falcatae, 8—14 cm longae, 2—4 cm latae, apice acuminatae vel longe caudatae, basi valde obliquae, latere angustiore cuneatae, latere latiore auriculatae vel subrotundatae, auriculis 1.2—1.4 cm longis, margine lobatae vel incisae, sparse inaequaliter duplicato-serratae, sarraturis triangularibus apice saepe breviter aristatis, in siccitate supra brunneo-virides, sparse brevihispidulae, subtus viridulae, ad nervos brevihispidulae, nervis nervulisque conspicue prominentibus; petioli 1.5—3 cm longi,

pubescentes; stipulse membranaceae, ovato-lanceolatae caducae. Inflorescentiae axillares, cymosae, 2—4 (—5)-florae; pedunculi 4—5 cm longi; bracteae ovatae vel oblongae, 8—13 mm longae, circ. 5 mm latae, apice acuminatae; pedicelli 5—10 mm longi, subglabri; bracteolae membranaceae, lanceolatae, circ. 6 mm longae, apice acuminatae. Flos staminatus: tepala rosea, 4, 2 exteriora late ovata, circ. 10 mm longa, 9 mm lata, apice rotundata, extus saepe puberula, 2 interiora elliptica, circ. 8 mm longa, 4 mm lata, apice rotundata; stamina numerosa, filamentis liberis 0.8—1 mm longis in capitulum confertis, antheris obovoideis 1 mm longis. Flos pistillatus: tepala ut in flore staminato; ovarium 2-loculatum, in quoque loculo placentae segmentis 2 praeditum. Capsula 1—1.2 cm longa, 3-alata, ala una maxima subfalcata, 1.8—2 cm longa apice rotundata conspicue nervata, alis reliquis duabus minoribus subaequalibus oblique triangularibus 5—7 mm longis; semina numerosa, brunneola, oblonga, 0.5—0.7 mm longa, laevia.

Yunnan（云南）: Gongshan（贡山）, Dulong River（独龙江）, at edges of the evergreen broad-leaved forests, 1982-08-07, Qingzang Exped.（青藏队）8998（holotype, KUN）; same locality, alt. 1600 m, in bushes by streams, fl. pink, 1982-08-05, Qingzang Exped. 8898; same locality, Langwangduo（朗王夺）, alt. 1400 m, in evergreen forests, 1991-06-30, Dulongjiang Exped.（独龙江考察队）3788; same locality, alt. 1400 m, in forests of valley, 1990-12-09, Dulongjiang Exped. 948; same locality, Langbendang（朗本当）, alt. 2000 m, in broadleaved forests, 1991-03-27, Dulongjiang Exped. 5227.

本种和台湾秋海棠 *B. taiwaniana* Hayata 极相近，但叶片镰刀状，边缘有不规则重锯齿，小脉明显，而易于识别。分布区亦间断甚远。

21　长纤秋海棠　新种　图17

Begonia longiciliata C. Y. Wu, sp. nov. (Sect. Platycentrum Klotzach)

Species nova ab affinibus distinctissima foliis supra sparsissime longeque hirsutis et margine longe ciliatis.

Herba perennis. Rhizoma teres, noduliforme, radices numerosas longas edens. Folia basalia petiolata; laminae inaequilaterales, ambitu ovato-orbiculares, 6—12 cm longae, 5—8.9 cm latae, apice acuminatae, basi obliquae, latere angustiore rotundatae, latere latiore auriculatae, auriculis usque ad 1—2.2 cm longis, margine irregulariter denticulatae, denticulis triangularibus apice pilis 3—4.5 mm longis vestitis, supra saturate virides, sparse longeque hirsutae vel subglabrae, subtus viridulae, sparse puberulae, palmatim 6—7-nerves, nervis supra inconspicuis subtus prominentibus; petioli 4—11.2 cm longi, longitudinaliter angulati, dense brunneo-hirsuti; stipulae membranaceae, brunneae, caducae. Scapus usque ad 10—13 cm altus, longitudinaliter angulatus; monochasium 2-florum; bracteae ovato-lanceolatae, caducae; pedicelli 1.3—2.1 cm longi, longitudinaliter angulati, subglabri. Flos staminatus: tepala 4, 2 exteriora oblongo-ovata, circ. 1.3 cm longa, 8 mm lata, apice rotundato-obtusa, 2 interiora oblongo-lanceolata, circ. 9 mm longa, 3.5 mm lata; stamina numerosa, filamentis 2 mm longis. Flos pistillatus ignotus. Capsula 1.2—2 cm longa, 3-

alata, una ala maxima lata lanceolata 1.5—2.5 cm longa apice rotundata glabra conspicue nervata, reliquis alis duabus minoribus angustioribus lunatis circ. 3.5 mm longis; semina numerosa, brunneola, oblonga, laevia.

Guizhou (贵州): Anlong (安龙), alt. 990 m, in caves of valley, 1960-05-14, Guizhou Exped. (贵州队) 5117 (holotype, KUN, isotype PE); same locality, alt. 1100 m, in dense forests of valley, 1960-06-12, Guizhou Exped. (贵州队) 4349; Xingyi (兴义), alt. 1000 m, 1959-08-09, Anshun Exped. (安顺队) 557 (KUN); Chenfeng (贞丰), 1936-09-20, S. W. Teng (邓世纬) 90997 (A, IBK).

本种以叶片上面有极疏而长的硬毛,边缘有长睫毛而区别于近缘种。

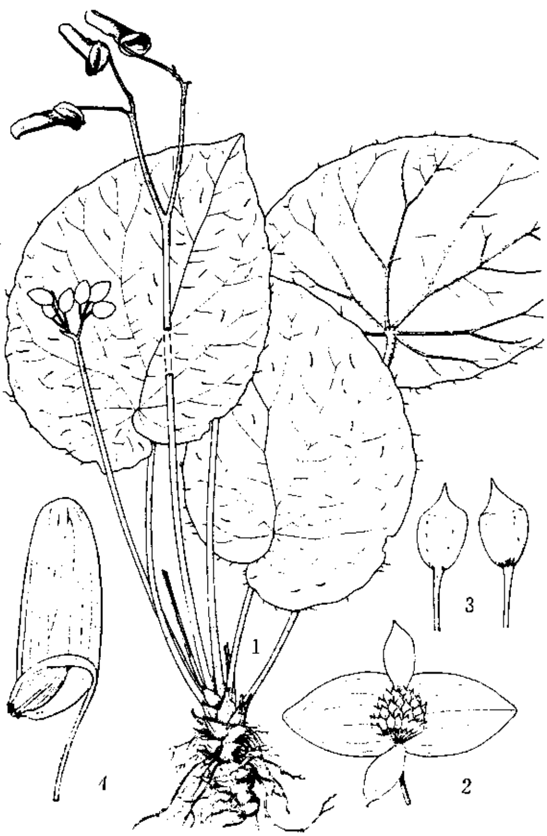


图17　长纤秋海棠　1. 植株; 2. 雄花; 3. 雄蕊; 4. 果实。(吴锡麟绘)
Fig. 17　*Begonia longiciliata*　1. habit; 2. male flower; 3. stamens; 4. fruit.

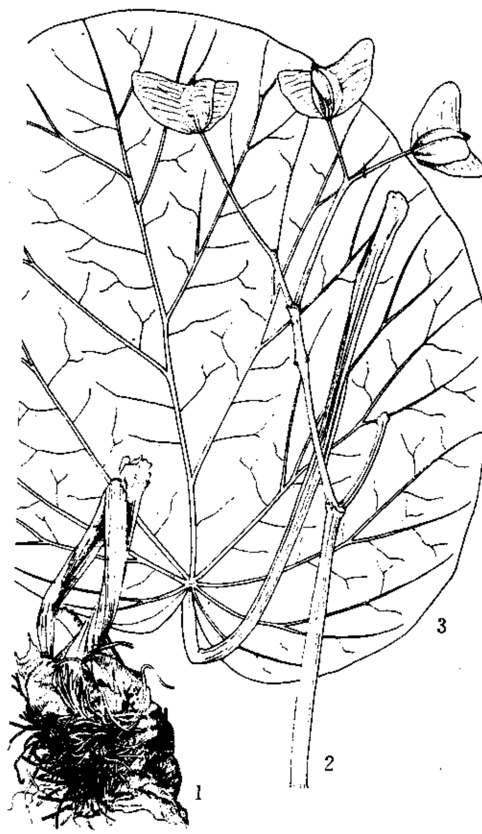


图18　大叶秋海棠　1. 根状茎; 2. 果序; 3. 叶。(吴锡麟绘)
Fig. 18　*Begonia megalophyllaria*　1. rhizome; 2. infructescence; 3. leaf.

22　大叶秋海棠　新种　图18

Begonia megalophyllaria C. Y. Wu, sp. nov. (Sect. Platycentrum Klotzsch)

Species rhizomatibus perrobustis tortuosis ubique concavis, foliis magnis orbicularbus in Sectione distinctissima.

Herba perennis. Rhizoma perrobustum, longe tuberiforme, tortuosum, ubique concavum, radices numerosas longas edens. Folium basale unum, longe petiolatum; lamina depresse orbicularis, usque ad 23 cm longa, 34 cm lata, apice rotundata vel emarginata, basi leviter obliqua, profunde cordata, margine remote irregulariterque denticulata, denticulis triangularibus parvis, in siccitate supra brunneo-viridis, glabra vel subglabra, subtus brunneolo-viridis, glabra vel ad nervos hispidula, palmatim 11-nervata, nervis utrinque prominentibus; petiolum circ. 20 cm longum, brunneum, longitudinaliter angulatum, glabrum; stipulae membranaceae, caducae. Scapus circ. 22 cm altus; dichasium floribus nonnullis praeditum; pedicelli 8—10 mm longi. Flores ignoti. Capsula 1.4—1.6 longa, glabra, 2-loculata, in quoque loculo placentae segmentis 2 praedita, 3-alata, glabra, ala una maxima oblonga circ. 1.2 cm longa 6—7 mm lata apice subtruncata, conspicue nervata, reliquis alis duabus minoribus angustatis lunatis circ. 3 mm longis.

Yunnan : Pingbian (屏边), Yaoshan Mt. (瑶山), alt. 900—1000 m. in shady, moist places under forests on steep slopes, 1954-10-26, K. M. Feng (冯国楣) 5184 (holotype KUN, isotype PE).

本种以根状茎粗壮,叶片极大而呈圆形,在该组内极为特殊。

23　峨眉秋海棠　新种　图19

Begonia emeiensis C. M. Hu, sp. nov. (Sect. Platycentrum Klotzsch)

Species habitu *B. clavicauli* Irmsch. similis, sed foliis basalibus vel caule abbreviato, floribus majoribus staminatis et pistillatis 3—4 cm diam. differt.

Herba perennis, monoecia. Rhizoma robustum, teres, obliquum, radices numerosas longas edens. Caulis vulgo brevis. 4 cm, interdum usque ad 20 cm altus. laminae inaequilaterales, ovato-oblongae, 12—14 cm longae, 11—13 cm latae, apice caudato-acuminatae, basi valde obliquae, latere angustiore rotundatae, latere latiore profunde auriculatae, auriculis 2—4 cm longis, margine irregutariter denticulatae, denticulis apice saepe aristatis, saepe lobatae, siccitate supra saturate virides vel brunneo-virides, subglabrae vel sparse hispidulae, subtus viridulae, subglabrae, palmatim 6—7-nerves, nervis lateralibus conspicuis; petioli 17—27 cm longi, longitudinaliter angulati, subglabri; stipulae caducae. Dichasium nonnulliflorum. Flos staminatus: tepala 4, rosea, oblonga, 2 exteriora majora, circ. 1.2 cm longa, 8 mm lata, apice rotundata, 2 interiora minora, 7—10 mm longa, 8—9 mm lata, apice rotundata; stamina numerosa, filamentis 2—2.5 cm longis liberis, antheris oblongis circ. 1 mm longis. Flos pistillatus: tepala 5 vel 6. rosea, forma variabilia; ovarium 2-loculatum, in quoque loculo placentae segmentis 2 praeditum; styli 2, breves. Capsula juvenalis anguste 3-alata.

Sichuan (四川): Emei Mt. (峨眉山), Hongchunping (洪椿坪), alt. 950 m, 1957-12-11, G. H. Yang (杨光辉) 57528 (holotype, KUN); same locality, Emei Mt. (峨眉山). **Heilongjieng** (黑龙江), alt 900 m, by streams in shrubberies, flower pink, 1964-08-26, K. J. Guan and J. W. Wang *et al.* (关克俭和汪劲武等) 1814. Tian quan (天全),

1939-09，F. C. Tai *et al.*（代蕃瑨等）5200A.

本种外形和腾冲秋海棠 *B. clavicaulis* Irmsch. 相近似，但叶基生或茎短缩；花较大，雌和雄花直径达3—4 cm，而不同。

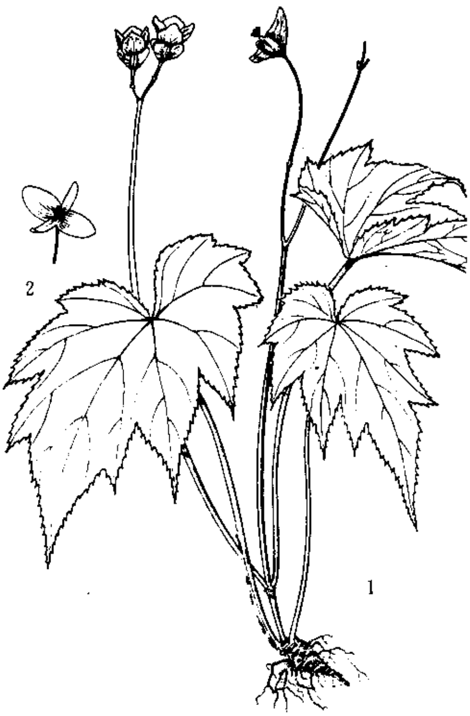


图19 峨眉秋海棠 1. 植株；2. 雄花。（李锡畴绘）
Fig. 19 *Begonia emeiensis* 1. habit; 2. male flower.

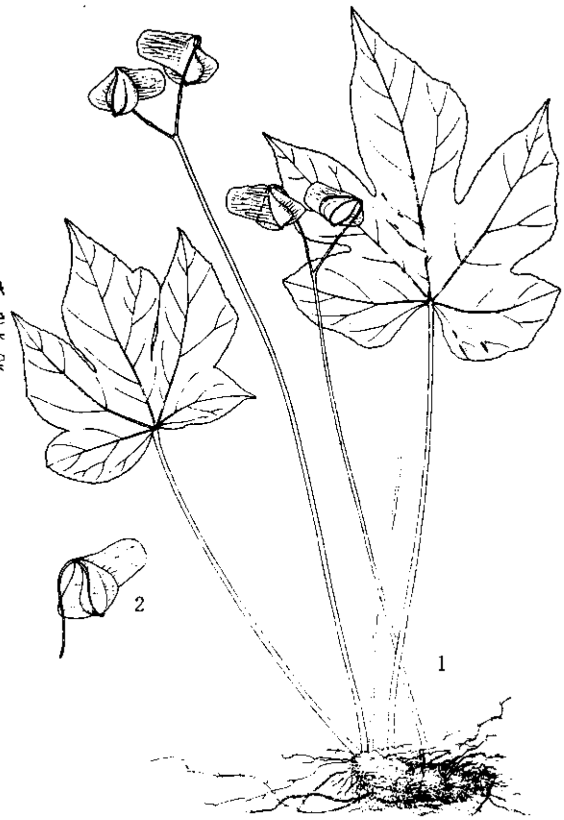


图20 少裂秋海棠 1. 植株；2. 果实。（吴锡麟绘）
Fig. 20 *Begonia paucilobata* 1. habit; 2. fruit.

24 山地秋海棠 新种

Begonis oreodoxa Chun et F. Chun, sp. nov. (Sect. Platycentrum Klotzsch)

Indumento *B. villifoliae* Irmsch. similis, sed foliis caulinis nullis, foliis omnibus basalibus, basi auriculis duabus inter se imbricatis, margine saepe inconspicue lobatis differt.

Herba perennis. Rhizoma teres, radices numerosas tenues longas edens. Folia omnia basalia, longe petiolata; laminae valde inaequilaterales, ambitu ovatae, suborbiculares vel late ovatae, 11—13.5 cm longae, 13—15 cm latae, latere angustiore circ. 5 cm lato, latere latiore 7—9 cm lato, apice acuminatae vel breviter caudato-acuminatae, basi valde obliquae auriculatae, auriculis valde inaequimagnis interse imbricatis, ea valde majore 3—4 cm longa, ea minore 1—2 cm longa, margine dense serratae, longe ciliatae, inconspicue lobtae, siccitate supra bunneo-virides, dense hirsutae. subtus brunneolo-virides, dense hirsutae, nervis

basalibus 7—9 subtus promenentibus; petioli 9—13 cm longi, dense brunneo-hirsuti; stipulae caducae. Scapus 6—9 cm altus, dense brunneo-hirsutus; cyma 4—8-flora, monoica; bracteae lanceolatae, 7—8 mm longae, longe ciliatae; pedicelli 5—10 mm, saepe pubescentes. Flores rubri. Flos staminatus: tepala 4, 2 exteriora inaequalia, late ovata vel suborbicularia, 12—13 mm longa, 13—15 mm lata, apice rotundata, extus villosa, 2 interiora obovata, circ. 10 mm longa, 8 mm lata, apice rotundata; stamina numerosa, filamentis liberis 1—1.5 mm longis in corpus globosum confertis, antheris oblongis 0.5—0.8 mm longis. Flores pistillati et fructus ignotus.

Yunnan (云南): Pingbian (屏边), Dawei Mt. (大围山), Jinzhuping (金竹坪), alt. 1200 m, in wet places under dense forests, 1940-04-01, X. Wang (王孝). X. P. Gao (高锡朋) and X. Q. Liu (刘心祈) 100036 (holotype, IBSC).

本种毛被和长毛秋海棠 *B. villifolia* Irmsch. 极相近。唯本种通常无茎生叶;叶边缘通常不浅裂;基部两侧圆耳状重叠而不同。

25 少裂秋海棠 新种 图20

Begonia paucilobata C. Y. Wu, sp. nov. (Sect. Platycentrum Klotzsch).

Species foliis palmatim 5-lobatis, lobis acuminatis margine leviter ciliato-denticulatis subglaberrimis distinctissima.

Herba perennis. Rhizoma robustum, teres, 1.5 cm crassum, obliquum, ad nodos radices numerosas inaequilongas edens. Folia omnia basalia, longe petiolata; laminae ambitu late ovatae vel pentagonae, 7—10 cm longae, 6.5—9 cm latae, apice caudatae, basi subcordatae vel cordatae, margine remote argute denticulatae, denticulis breviter aristatis, ad vel leviter infra medium 5-lobatae, lobo mediano longiore oblique ovato, lobis lateralibus brevioribus oblique ovatis, lobis infimis parvis late ovatis acutis, supra brunneo-virides, sparsissime hispidulae, subtus viridulae, subglabrae vel ad nervos puberulae, palmatim 5-nerves, nervis subtus conspicuis; petioli 11—14.5 cm longi, subglabri; stipulae membranaceae, caducae. Scapus 19—22.2 cm altus, longitudinaliter angulatus, subglaber; monochasium vel dichasium fructiferum tantum cognitum; pedicelli fructiferi 1.8—2.1 cm longi, longitudinaliter angulati, subglabri, nutantes. Capsula circ. 1.5 cm longa, 3-alata, ala una maxima oblonga 1.3—1.5 cm longa 9—13 mm lata apice trunato-rotundata conspicue nervata, reliquis alis duabus minoribus inaequalibus oblique semiorbicularibus, 2-loculata, in quoque loculo placentae segmentis 2 praedita; semina numerosa, brunneola, laevia.

Yunnan (云南): Suijiang (绥江), alt. 1700 m, under forests, 1973-10-07, K. M. Feng *et al.* (冯国楣等) 73-227 (holotype, KUN).

本种以叶掌状5裂,裂片渐尖,近无毛,边缘具浅而带睫毛的齿,因而在该组内易识别。

26 多毛秋海棠 新种 图21

Begonia polytricha C. Y. Wu, sp. nov. (Sect. Platycentrum Klotzsch)

B. rockii Irmsch. similis, quae foliorum laminis supra breviter hispidulis margine vulgo undivisis, petiolis pedicellis tepalisque extus sparse pubescentibus differt.

Herba perennis. Rhizoma obliquum, oblongo-teres, 6—8 mm crassum, nodis densis, squamis brunneis membranaceis praeditum, radices numerosas longas edens. Caulis 20—28 cm altus, brunneo-hispidus. Folium basale vulgo unum, cum eis caulinis conforme; laminae inaequilaterales, ovatae, 6—7 cm longae, 4—5 cm latae, apice breviter caudatae, basi obliquae, latere angustiore rotundatae, latere latiore auriculatae, auriculis usque ad 1.2 cm longis, margine dense denticulatae, irregulariter levissime lobatae, denticulis triangularibus apice aristis 0.8—1 mm longis praeditis, siccitate supra brunneo-virides, dense hirsutae, subtus pallidae, purpureo-suffusae, sparse hirsutae, nervis utrinque prominentibus; petioli (4—) 6—12 cm longi, longitudinaliter angulati, dense crispule brunneo-hirsuti; stipulae membranaceae, ovatae, subiter acuminatae, margine ciliatae, caducae. Dichasium 2-florum; pedunculus 1—3 cm longus, cum pedicellis dense brunneo-hirsutus; pedicelli circ. 1 cm longi; bracteolae membranaceae, triangulari-lanceolatae, 4—5 cm longae, 3.5 mm latae, acuminatae, longe ciliatae. Flos staminatus: tepala 4, 2 exteriora oblongo-ovata, 9—13 mm longa, 7—10 mm lata, apice rotundata, extus brunneo-hirsuta, 2 interiora oblonga, circ. 6 mm longa, 1.5—2 mm lata, apice rotundata; stamina numerosa, filamentis liberis 1.5 mm longis in capitulum confertis, antheris oblongis circ. 0.8 mm longis. Flos pistillatus: tepala 5, 2 exteriora oblonga, circ. 1 cm longa, 9 mm lata, apice rotundata, extus hirsuta, 3 interiora inaequalia, anguste vel late oblonga; ovarium dense hirsutum. Capsula ignota.

Yunnan (云南): Luchun (绿春), near village Lao bianxiang (近老边乡), alt. 1800—1900 m, under broadleaved forests in valley, 1973-10-11, D. D. Tao (陶德定) 678 (holotype KUN, isotype PE); Yuanyang (元阳), Huanglian Mt. (黄连山), alt. 1900—2200 m, in evergreen forests at mountain-foot, 1973-10-06, D. D. Tao (陶德定) 919; Maguan (马关), Laojun Mt. (老君山), alt. 2000 m, 1959-06-06, Q. A. Wu (武全安) 8219 (KUN).

该种外形和滇缅秋海棠 *B. rockii* Irmsch. 相似,区别在于后者叶片上面被短硬毛,边缘仅具齿,通常不分裂,叶柄、花梗和花被片外面散生柔毛。

27 假厚叶秋海棠 新种 图22

Begonia pseudodryadis C. Y. Wu, sp. nov. (Sect. Platycentrum Klotzsch).

Species probabiter *B. dryadi* Irmsch. affinis, sed rhizomatibus fractiflexis, squamis longe ovatis longe acuminatis dense obtectis, inflorescentiis bracteis ovatis emarginatis involutis differt.

Herba perennis. Rhizoma robustum, curvatum, 1—1.6 cm crassum, internodiis brevibus, squamis numerosis membranaceis brunneis longe ovatis 1—1.6 cm longis 5—8 mm latis apice longe acuminatis obtectum, ex axillis squamarum radices numerosas inaequilongas edens. Folia omnia basalia, longe petiolata; laminae subcoriaceae, valde inaequilaterles, subtransversaliter longe ovatae, 4—8 cm longae, 4.5—5.6 cm latae, apice longe caudato-acuminatae, basi valde obliquae, cordatae, latiore angustiore angustatae, latiore lobis

semiorbicularibus, margine subintegrae vel interdum repando-crenatae, siccitate supra atro-brunneae, nervis inconspicuis, subtus atro-rubro-brunneae, utrinque subglabrae, foveolatae, palmatim 7-nerves, costa media cum petiolo sub angulo acuto patente, nervis basalibus in quoque latere inaequilongis; petioli 5—11.8 cm longi, subglabri; stipulae membranaceae, ovatae, caducae. Scapus 5.5—6 cm altus, subglaber; bracteae 2, brunneae, oblongae vel ellipticae, 1.5—2.1 cm longae, 8 mm latae, apice acuminatae vel obtusae, basi cuneatae, marginae integrae, extus puberulae; pedicelli circ, 6 mm longi, subglabri. Flos staminatus: tepala 4, 2 exteriora ovata, circ. 8 mm longa, 5 mm lata apice rotundata; stamina numerosa, filamentis 0.8—1 mm longis, basi tantum connatis, antheris obovoideis circ. 0.6 mm longi. Flos pistillatus ignotus.

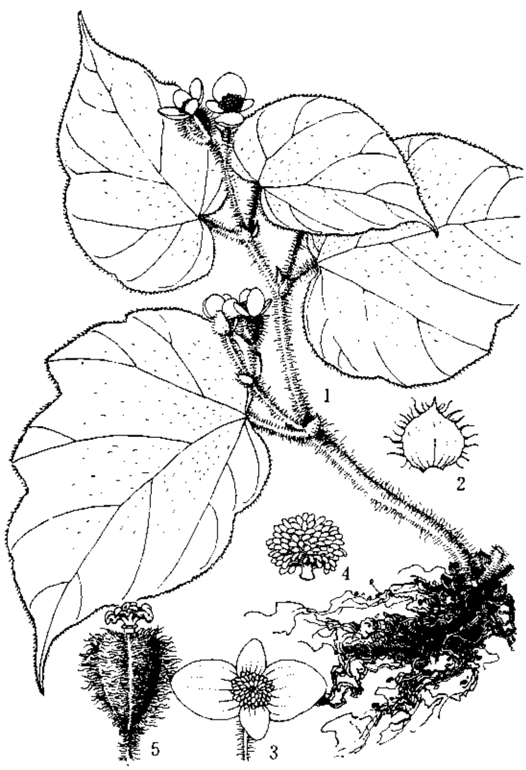


图21 多毛秋海棠 1.植株;2.苞片;3.雄花;4.雄蕊;5.幼果。(曾孝廉绘)

Fig. 21 *Begonia polytricha* 1. habit; 2. bract; 3. male flower; 4. stamens; 5. young fruit.



图22 假厚叶秋海棠 1.植株;2.雄花。(曾孝廉绘)

Fig. 22 *Begonia pseudodryadis* 1. habit. 2. male flower.

Yunnan (云南): Pingbian (屏边), Yaoshan Mt. (瑶山) alt. 1320 m, on mossy rocks in valley, 1953-07-06, P. Y. Mao (毛品一) 2389 (holotype, KUN).

本种可能近似厚叶秋海棠 *B. dryadis* Irmsch.,唯根状茎弯曲,密被长卵形、先端长渐尖的鳞片,花序的苞片卵形,先端微凹,内卷而不同。

28 倒鳞秋海棠 新种 图23

Begonia reflexisquamosa C. Y. Wu, sp. nov. (Sect. Platycentrum Klotzsch)

A *B. macrotomae* Irmsch. caulibus, petiolis pedunculisque sparse reflexe rubro-squamosis, capsulis robustioribus ellipsoideis, ala majora deltoidea obtusa distinctissima.

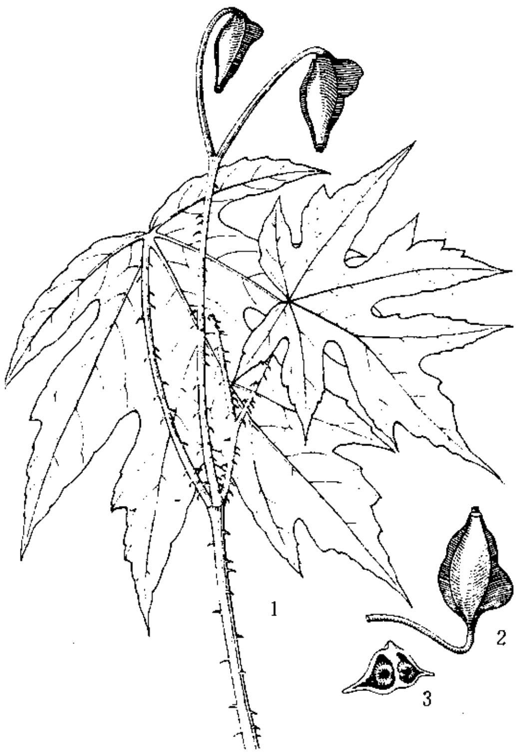


图23 倒鳞秋海棠 1. 植株；2. 果实；3. 果横切面。(肖溶绘)

Fig. 23 *Begonia reflexisquamosa* 1. habit; 2. fruit; 3. section of fruit.

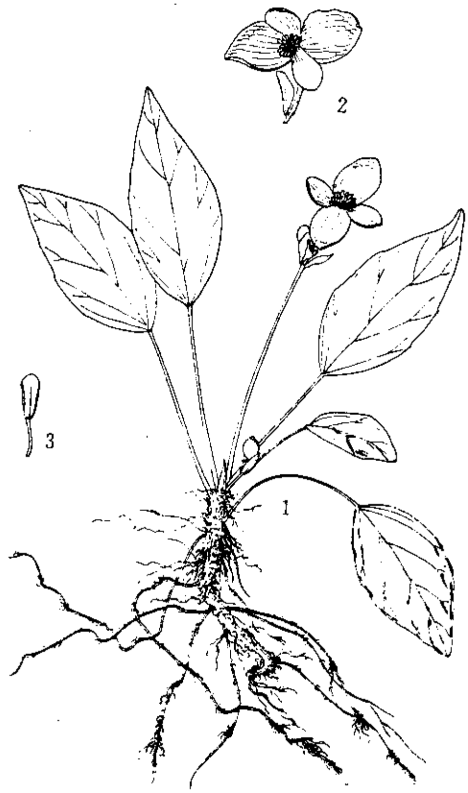


图24 观光秋海棠 1. 植株；2. 雄花；3. 雄蕊。(吴锡麟绘)

Fig. 24 *Begonia tsoongii* 1. habit; 2. male flower; 3. stamen.

Herba perennis. Rhizoma horizontale, robustum, nigro-brunneum, teres, 10—13 mm crassum, ad nodos radicans. Caulis circ. 10.5 cm altus, 5—6 mm diam., longitudinaliter angulatus, brunneo-viridis, squamis rubris reflexis vestitum. Folium basale unum, longe petiolatum; lamina ambitu depresse orbicularis, circ. 21 cm longa, 31 cm lata, apice longe acuminata, basi subcordata, palmatim 6-partita, lobo primario mediano ambitu obtriangulari bis partito, lobis secundariis oblongo-lanceolatis, lobis tertiariis lanceolatis, lobis primariis lateralibus longe ellipticis, lobis secundariis triangulari-lanceotis apice acuminatis, lobis primariis infimis lanceolatis lobatis, margine remote crenata, siccitate supra saturate viridis, sparse vel dense puberula, subtus viiridula, nervis conspicue prominentibus rubrobrunneis, ad nervos brunneo-puberula, et ad bases nervorum squamis brunneis vestita; petioli circ. 24

cm longi, robusti, circ. 5 mm diam., brunnei, squamis rubro-brunneis vestiti; stipulae caducae. Folia caulina eis basalibus conformia, sed minora, brevius petiolata, saepe semel vel bis divisa, 5—7 cm longa. Monochasia axillaria, saepe 2-flora; pedunculi 13—17 cm longi, rubri, squamis rubro-brunneis vestiti; pedicelli 4.5—5.8 cm longi, vetustate subglabri. Tepala floris staminati 4 (excollectore), alba. Tepala floris pistillati 5 (ex collectore) alba. Capsula oblonga 1.2—2.5 cm longa, 2-loculata, in quoque loculo placentae segmentis 2 praedita, alis 3 parvis inaequalibus; semina numerosa brunneola, oblonga vel ovoidea, circ. 0.8 mm longa, laevia.

Yunnan (云南):Luchun (绿春), Huanglian Mt. (黄连山), alt. 1750—1820 m, in shady places on slopes, 1991-08-21, Y. M. Shui (税玉民) B91-593 (holotype KUN, isotype YUKU); Pingbian (屏边),alt. 1500—1600 m, 1991-07-28, Y. M. Shui (税玉民) B91-480 (KUN, YUKU).

本种和大裂秋海棠 *B. macrotoma* Irmsch. 相近似,唯茎、叶柄和总花梗具反折带红色的鳞;蒴果较粗壮,呈椭圆体,翅大,三角形,先端钝而不同。

29　榕江秋海棠　新种

Begonia rongjiangensis Ku. sp. nov. (Sect. Begonia)

Habitu *B. yuii* Irmsch. similis, sed foliis petiolisque glabris margine remote majus et interdum duplicato serratis differt.

Herba perennis. Rhizoma globosum, 5—8 mm diam., interdum duo connata, radices numerosas tenues edens. Folia basalia 2—4, longe petiolata, glabra; laminae subpapyraceae, longe ovatae, 8.5—11 cm longae, 5.5—9.5 cm latae, apice acuminatae, basi leviter obliquae, cordatae, margine remote grosseque serratae, interdum duplicato serratae, serraturis apice saepe apiculatis, siccitate supra rubro-brunneae, subtus pallidae, palmatim 5—7-nerves; petioli 4—9.5 cm longi, longitudinaliter angulati; stipulae membranaceae, caducae. Scapi circ. 15 cm alti, glabri; flores aliquot in cymam dispositi, saturate rosei, monoici; bracteae membranaceae, lanceolatae, circ. 3 mm longae, caducae. Flos staminatus: tepala 4, 2 exteriora semiorbicularia, 6—8 mm longa, 6—7 mm lata, apice rotundata, basi leviter cordata, extus villosa, 2 interiora oblonga, 6—8 mm longa; 1—2 mm lata, apice obtusa; stamina aliquot, filamentis circ. 1 mm longis infra medium connatis, antheris oblongis 1—1.1 mm longis apice emarginatis. Flos pistillatus: tepala 2, late obovata, 7—8 mm longa, 6—7 mm lata, apice emarginata; styli 3; stigmata capitata, papillata: ovarium oblongum, sparse villosum, 3-alata, ala maxima depresse triangulari circ. 10 mm longa 5 mm lata apice acuta glabra, reliquis alis duabus lunatis tantum 1—2 mm latis. Fructus ignotus.

Guizhou (贵州): Rongjiang (榕江), Yueliang Mt. (月亮山), by streams on slopes, 1958-08-03, South Guizhou Exped. (黔南队) 3165 (holotype, PE).

本种外形和俞氏秋海棠 *B. yuii* Irmsch. 近似,但叶片两面和叶柄均无毛,边缘的齿疏而大,有时呈重锯齿状。而不同。

30 观光秋海棠 新种 图24

Begonia tsoongii C. Y. Wu, sp. nov. (Sect. Platycentrum Klotzsch)

Species in Sect. Platycentro Ser. Aequilateralibus, foliis oblongo-ovatis vel rhomboideo-ovatis, basi fere aequilateralibus, cuneatis raro late cuneatis specialis.

Herba perennis. Rhizoma verticale, teres, 5—10 mm crassum, saepe noduliforme, squamis brunneis membranaceis praeditum, ad nodes rodices numerosas longas edens. Folia omnia basalia, longe petiolata; laminae oblongo-ovatae vel rhomboideo-ovatae, 6—6.5 cm longae, 1.9—3 cm latae, apice acuminatae vel caudato-acuminatae, basi cuneatae vel late cuneatae, margine valde remote argute serrulatae, siccitate supra saturate virides, subglabrae vel sparse puberulae, subtus pallidae, rubro-viridi-suffusae, ad nervos brunneo-puberulae; petioli 4.8—7.5 cm longi, brunneo-pubescentes; stipulae membranaceae, caducae. Scapus 7—17 cm altus, longitudinaliter angulatus, glaber vel subglaber, basi squamis membranaceis late ovatis circ. 7 mm longis 3—4 mm latis caducis praeditus. Cyma 1—2-flora; bracteae membranaceae, oblongae vel ovatae, 6—8 mm longae, 4 mm latae; pedicelli 4—12 mm longi, glabri. Flos staminatus: tepala 4, roseo-alba, 2 exteriora majora, late ovata vel late oblonga, circ. 8 mm longa, 6 mm lata, apice rotundata, 2 interiora obovato-oblonga, circ. 6 mm longa, 4 mm lata, apice rotundata; stamina numerosa, filamentis liberis 1.2—1.5 mm longis in capitulum confertis, antheris oblongis vel obovatis 1.2—1.5 mm longis, connectivis haud projectis. Flos pistillatus: tepala 4—5 (?); styli 2, circ. 2 mm longi, maxima parte connati; stigmata 2, torsiva. Capsala 1.4 cm longa, 3-alata, ala una maxima circ. 13 mm longa 5 mm lata apice rotundata conspicue nervata, reliquis alis duabus parvis semiorbicularibus 2—3 mm longis; semina numerosa, brunneola, oblonga, laevia.

Guangxi (广西): Qinzhou (钦州), 1919-11-16, K. K. Tsoong (钟观光) 2663 (holotype fl. KUN, isotype fr. PE).

该种在本组内以叶片长圆状卵形或菱状卵形,基部几相等,呈楔形稀宽楔形,花数较少而极为特殊。与马来亚产的 *B. rheophila* Ridley 应属同系,但该种叶长圆卵形或菱状卵形,且分布区隔离殊远。